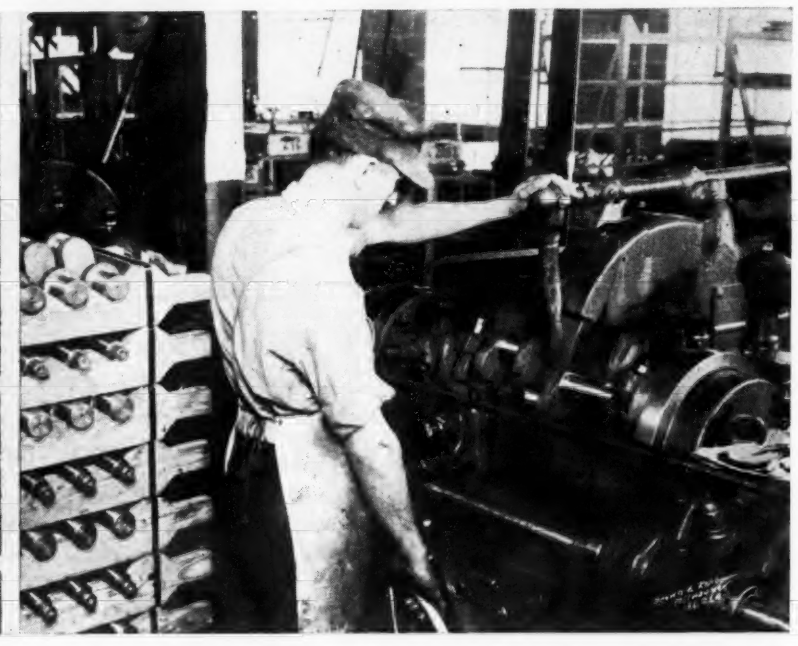
How Refrigeration Crankshafts Are Made at Modern Machine Works



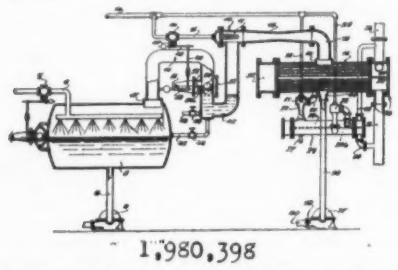
Some of the operations in manufacture of crankshafts for refrigeration systems at the Modern Machine Works, Inc., which moved recently from Milwaukee to new and larger factory quarters at Cudahy, Wis. (1) Turning the flywheel end of a crankshaft, and recessing and facing bearings to length. (2) A workman in the Modern plant forms connecting rod bearings on a four-throw crankshaft. (3) In another department, a workman finish-grinds connecting rod bearings on a two-throw shaft.

PATENTS

Issued Nov. 13, 1934

1,980,398. VACUUM PRODUCING APPARATUS. Harold M. Graham, Buffalo, N. Y., assignor, by mesne assignments, to Ross Heater & Mfg. Co., Inc., Buffalo, N. Y., a corporation of New York (1933). Application March 23, 1933. Serial No. 662,279. 9 Claims. (Cl. 257—24.)

1. Ejector equipment for evacuating a chamber and adapted to be employed in connection with a condenser, said equip-



1,980,398

ment including means providing a plurality of paths of communication between said chamber and said condenser, ejectors included in said paths, said ejectors discharging into said condenser, means for rendering one of said ejectors inoperative and means for creating a liquid seal in the path of communication which includes said last named ejector, whereby to prevent a back flow through the path which includes the inoperative ejector when another of said ejectors is operative.

1,980,446. REFRIGERATOR VEHICLE BODY. Wray B. Smith, Atlanta, Ga. Application Jan. 12, 1932. Serial No. 586,217. 3 Claims. (Cl. 296—31.)

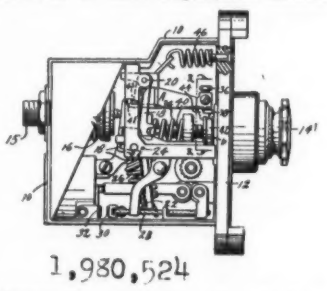
1 A vehicle body including a panel embodying a framework including parallel members, diagonal braces between the parallel members to absorb the torsional stresses, an insulating material arranged between and surrounding said braced framework, and a protective covering for the exposed surfaces of said insulating material.

1,980,465. ICE CUBE TONGS. Alfred H Ackerson, Glen Ellyn, Ill., assignor to Utili-Tong, Inc., Chicago, Ill., a corporation of Illinois. Application Nov. 25, 1932. Serial No. 644,300. 3 Claims. (Cl. 294—115.)

1. In a tongs having a tubular body portion and a stem mounted for reciprocal movement therein, the combination of a grooved collar press fitted over the lower end of said stem, a second collar press fitted over the lower end of said body portion and having integral angularly extending yoke portions, tong members having cam portions and hook portions, said members being passed through said yoke portions to engage said cam portions in said grooved collar and to engage said hook portions about said yoke portions, and a spring member normally maintaining said stem in raised position to close said tongs.

1,980,524. DEFROSTER SWITCH. Malcolm E. Henning, Des Moines, Iowa, assignor to Penn Electric Switch Co., Des Moines, Iowa, a corporation of Iowa. Application July 10, 1933. Serial No. 679,681. 12 Claims. (Cl. 200—83.)

1. For use with a control mechanism including a cyclically operated movable member and adjustable means for adjusting the normal range thereof, a cam movable by said adjustable means, means in addition to said adjustable means for



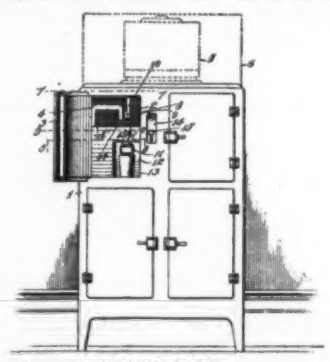
1,980,524

modifying the operation of a device controlled by said control mechanism to secure either a temporary non-normal operating cycle or continuous operation of said device comprising a resisting member cooperating with said cam when moved to a predetermined position to resist movement of said movable member for securing said non-normal cycle of operation, said cam having a lobe to positively move said cyclically operated movable member to secure said continuous operation.

1,980,531. ABSORPTION REFRIGERATING SYSTEM. Oscar Johnson, Stockholm, Sweden, assignor, by mesne assignments, to Electrolux Servel Corp., New York, N. Y., a corporation of Delaware. Application March 2, 1931. Serial No. 519,330. In Germany May 12, 1930. 15 Claims. (Cl. 62—119.5.)

13. The method of raising the level of a column of liquid which comprises heating the liquid to form vapor which rises through the column in the form of bubbles, collecting below the liquid level bubbles of the vapor to accumulate a relatively large volume of vapor, and injecting the larger volume of vapor into said column.

1,980,571. MEANS FOR OBTAINING ICE-BLOCKS FROM AN AUTOMATIC TYPE REFRIGERATOR. Leon S. Brach,



1,980,571

East Orange, N. J. Application March 15, 1932. Serial No. 598,904. 26 Claims. (Cl. 62—108.5.)

1. Means for obtaining ice-blocks from an automatic refrigerator including a plurality of individual and separable containers having means by which they may be engaged for the purpose set forth, mechanism for advancing certain of said containers in transverse rows through the freezing part of the refrigerator, other mechanism for advancing a single row of containers outside said freezing part of the refrigerator, one at a time to an unloading station while maintaining those within the freezing part of the refrigerator stationary until all in said outside row have been moved to said unloading station, mechanism for ejecting the frozen blocks from the containers as they reach the unloading station, additional mechanism for moving the empty containers to a water filling station, further mechanism for filling each container as it passes through the filling station, and means extending outside the refrigerator for starting said means into operation.

1,980,674. TANK CAR. Clyde H. Folmsbee, Berwick, Pa., assignor to American Car & Foundry Co., New York, N. Y., a corporation of New Jersey. Application June 1, 1933. Serial No. 673,843. 17 Claims. (Cl. 62—17.)

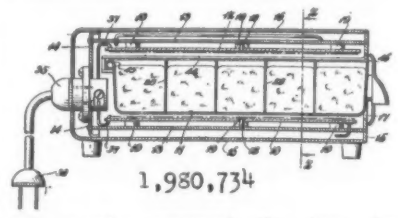
1. In a railway car tank for the transportation of liquid lading, a body, and means for maintaining the liquid lading at a low temperature comprising refrigerant holding containers in the body and provided with baffles secured thereto and connected with the body and depending below the containers to increase the effective cooling areas.

1,980,688. AIR CONDITIONING AND REFRIGERATION SYSTEM. Carroll E. Lewis, Minneapolis, Minn., assignor, by mesne assignments, to Lewis Air Conditioners, Inc., Minneapolis, Minn., a corporation of Delaware. Application May 29, 1930. Serial No. 456,936. 6 Claims. (Cl. 62—115.)

1. In cooling and refrigeration systems, a refrigeration unit, a cooling element, a source of cold fluid supply connected with said cooling element and chilled by said refrigeration unit, a reserve source of hot fluid supply also connected with said cooling element, a common means for setting up a circulation with either of said fluid supplies through said cooling element and means for simultaneously connecting one of said sources of fluid supply with said element and disconnecting the other source of fluid supply with said element.

1,980,734. LOOSENING ICE CUBES. Helena S. Sadtler, Erdenheim, Pa., assignor of one-half to Hobart N. Durham, Jackson Heights, N. Y. Application Aug. 22, 1930. Serial No. 476,998. 3 Claims. (Cl. 215—19.)

1. A heater for loosening ice cubes in a domestic refrigerator tray including in combination a casing adapted to receive



1,980,734

and closely surround the tray from which the ice cubes are to be loosened and into which one end of the ice tray is received and resistance heating elements supported by and within said casing, one of said elements extending over the bottom of the tray and positioned below said tray and the other of said elements being positioned above said tray, the heater for the top of the tray having its parts spaced from each other similarly to the spacing of the partitions in the tray to register with said partitions.

1,980,758. REFRIGERATOR CONTAINER FOR CONTAINER CARS. Graham C. Woodruff, Bronxville, N. Y., assignor to The L. C. L. Corp., a corporation of Delaware. Original application Sept. 15, 1931. Serial No. 562,982. Divided and this application July 7, 1932. Serial No. 621,266. 7 Claims. (Cl. 62—91.5.)

1. A container for container cars having a commodity receiving space, a roof, a ceiling spaced from the roof, a refrigerant container chamber in the upper portion of the body pendent from said ceiling and spaced from the walls of the body, said chamber having an inlet thereto extending downward through the ceiling and roof and said space having an inlet thereto in one of the walls of the body, closures for said inlets, a fluid circulating duct in said upper portion of the body extending around the walls thereof and about the refrigerant containing chamber in spaced relation thereto, and outlet and return connections between said chamber and said portion of the body.

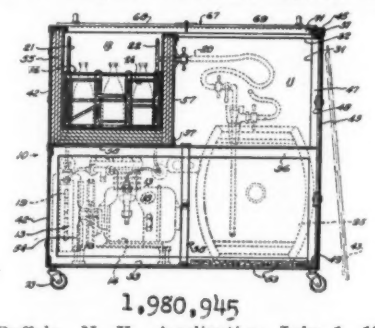
1,980,807. REFRIGERATOR CABINET. Albert L. Lambert, Narberth, Pa., assignor to Heintz Mfg. Co., a corporation of Pennsylvania. Application Oct. 11, 1932. Serial No. 637,232. 11 Claims. (Cl. 220—9.)

1 In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening, a pair of stirrups removably secured to said supporting member for adjustment into different positions on opposite sides of said opening, and a partition extending across said opening and having its ends in removable engagement with said stirrups

1,980,877. BEER REGULATING AND COOLING APPARATUS. George Putz, San Francisco, Calif. Application April 23, 1934. Serial No. 722,031. 4 Claims. (Cl. 225—1.)

1. In a beer cooling system of the class described, containers for holding bulk beer, a cooling chamber arranged between said containers, a cold air circulating system entering said containers, and pump means for maintaining a constant predetermined air pressure adapted to be circulated through the beer in said containers.

1,980,945. APPARATUS FOR COOLING BEVERAGES. Lawrence C. Smith, Buffalo, N. Y., assignor to Fedders Mfg. Co., Inc.,



1,980,945

Buffalo N. Y. Application July 1, 1932. Serial No. 620,468. 2 Claims. (Cl. 62—141.)

2. A refrigerator structure comprising a rectilinear cabinet having an open top, an insulated compartment member mounted laterally in the cabinet and having an open top, said compartment member being formed to occupy an upper corner of the space within the cabinet, a pair of coils in the compartment member, means connecting the coils in heat exchange relation, said coils being formed to receive bottles placed in said insulated compartment, refrigerating mechanism mounted in the cabinet below the compartment member and connected to supply refrigerant to one of said coils, a barrel in the cabinet adjacent the compartment member and connected to supply beverage to the remaining coil, a draft arm extending through the cabinet and compartment member and communicating with the last named coil, and a cover member for covering both the open tops of the compartment member and cabinet.

1,980,952. MACHINE FOR BREAKING CUBES OF ICE. Thomas J. Fegley and George O. Leopold, Philadelphia, Pa., assignors to North Bro's Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania. Application July 29, 1931. Serial No. 552,858. 12 Claims. (Cl. 83—63.)

1. The combination in an ice cube breaker, of a casing having a hopper at its upper end and a discharge opening at its lower end; a spindle mounted in bearings in the casing; a cylinder eccentrically mounted on the spindle and having two sets of teeth, the outer ends of one set of teeth being located near the center of rotation than the outer ends of the teeth of the other set; means for turning the spindle, the one wall of the hopper having a projection extending into the hopper and located above the cylinder so that an ice cube within the hopper will be held by the projection while it is being cut by the teeth of the cylinder.

2,000 Compete in Norge Contest in Kansas City

KANSAS CITY—Moser & Suor, Inc., Norge distributor here, recently closed a letter-writing contest based on the subject, "Why I want an electric refrigerator." Nearly 2,000 entries were recieved.

Norge refrigerators comprised the first three prizes, and an additional 316 credit coupons, to apply on purchase of a Norge and ranging from $10 to $75, were also awarded.

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THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

ESTABLISHED 1926. MEMBER AUDIT BUREAU OF CIRCULATIONS. MEMBER ASSOCIATED BUSINESS PAPERS. MEMBER PERIODICAL PUBLISHERS INSTITUTE.

VOL. 13, NO. 14, SERIAL NO. 298
ISSUED EVERY WEEK

DETROIT, MICHIGAN, DECEMBER 5, 1934

Entered as second-class matter Aug. 1, 1927

THREE DOLLARS PER YEAR
TEN CENTS PER COPY

Distributors of Norge Meet in Detroit, Dec. 10

1935 Products & Selling Plans to Be Presented At Convention

DETROIT—Norge distributors from all parts of the country will head for Detroit this week-end for their annual convention which opens Monday, Dec. 10, in the Detroit-Leland hotel to run for three days. They will view the 1935 Norge line and hear Norge Corp. executives outline selling programs for next year.

On Monday, Dec. 17, Norge distributors' wholesale salesmen will convene at the Detroit-Leland for a two-day meeting. Norge last winter adopted the custom of holding meetings for these men when it staged a convention for them in Muskegon.

Kinetic Chemicals Cuts Freon Price

WILMINGTON, Del.—Kinetic Chemicals, Inc., of this city has reduced the price of Freon to refrigeration manufacturers with which it is contracted for 1935, according to W. W. Rhodes, sales manager. The reduction will permit the manufacturers to quote their distributors and dealers a price of 10 cents per lb. out of warehouses.

Revisions have also been made in the price of cylinders in which Freon is contained. The 145-lb. cylinder has been reduced from $20 to $11, the 25-lb. cylinder from $10 to $8, and the 10-lb. container from $8 to $7.

Mr. Rhodes states that 40 manufacturers in the United States are now using Freon in air-conditioning, commercial refrigeration, and in some cases, household equipment.

401,812 Sets of Dry-Zero Sold for Refrigerators

CHICAGO—During the first nine month of 1934, Dry-Zero Corp. shipped complete sets of pliable slab insulation for 401,812 electric refrigerator cabinets, reports Harvey Lindsay, Dry-Zero president.

This brings Dry-Zero shipments of household refrigerator insulation during the first three quarters of the year to more than twice those during the like period in 1933. Due to lower prices, dollar volume has not kept pace with the gain in shipments.

Honored

WILLIS H. CARRIER

* * *

Carrier Will Receive Service Award of A.S.M.E.

NEW YORK CITY—The air-conditioning industry, and the man who is credited with having founded it, Willis H. Carrier, chairman of the board, Carrier Engineering Corp., were honored last week when the American Society of Mechanical Engineers announced that its 1934 medal for distinguished service in engineering and science will be awarded to Mr. Carrier.

The award was established in 1920. Presentation will be made during the meeting of the society this week.

The newsmagazine *Time,* in reporting the announcement of the award, relates the founding of the air-conditioning industry as follows:

"In 1902 a Brooklyn color processor who found his paper distorted by atmospheric humidity went to Buffalo Forge Co. to see what could be done. In the company's employ was Willis Carrier, just out of Cornell. Young Carrier was interested, began to experiment, found that warm wet air could be cooled and dried by passing it through an atomized spray."

Manufacturers Are Taxed $308,406 in October

WASHINGTON, D. C.—Mechanical refrigerator manufacturers in October paid internal revenue taxes of $308,406.

Blood Foresees 26% Increase for Industry in 1935

Norge's Survey of 12,000 Prospects Shows Greater Buying Interest

DETROIT—"The 1935 refrigerator volume will exceed this year's all time record by at least 26 per cent," President Howard E. Blood of Norge Corp. predicted last week after studying the results of a market survey which was conducted by the staff of G. E. Stedman, vice president in charge of market planning for Cramer-Krasselt, advertising agency for Norge.

Mr. Blood also made the forecast of a maximum sales volume of 2,200,000 units, or an increase of 47 per cent over this year's total.

"My minimum 1934 prediction was 35 per cent and maximum forecast was 48 per cent—actual sales will show about 43 per cent increase," Mr. Blood pointed out. "Thus the research method used, permitted us to hit the actual unit volume of sales almost squarely in the middle by a prediction made a year in advance.

"Where I predicted an actual 1934 unit volume of 1,622,880 units, the year will probably close with total sales of 1,510,000; my estimate being only 112,880 units off. This prediction was based upon 756,000 units of sure buying intent and 866,000 units of probable buying intent."

In October of this year, Norge Corp. again instituted a nationwide market study among 23,012 consumers and 1,042 dealers in 259 American cities;

(*Concluded on Page 7, Column 1*)

Rogo Heads Chicago Kelvinator Branch

DETROIT—Kelvinator Corp. has opened a factory sales branch in Chicago with G. E. Rogo as manager, according to H. W. Burritt vice president in charge of sales. The new outlet, which began operation Dec. 1, is located at 830 Rush St., and occupies a ground floor space of 4,500 sq. ft.

In Chicago proper, the branch will confine its activities to air-conditioning and apartment house work, with household refrigeration and the company's other products being handled by Commonwealth Edison Co. Outside Chicago the branch will distribute all Kelvinator lines, including general commercial, liquid cooling, domestic,

(*Concluded on Page 6, Column 2*)

Advanced

L. D. O'CONNELL

* * *

O'Connell to Manage Westinghouse Air Conditioner Sales

EAST PITTSBURGH—Mr. L. D. O'Connell, formerly industrial division manager for the St. Louis office of the Westinghouse Electric & Mfg. Co. has been appointed manager of air conditioning, according to an announcement made last week by F. A. Merrick, president of the company.

In his new position, Mr. O'Connell will have supervision over sales, engineering and manufacturing activities of all air conditioning apparatus.

After serving in the Naval Air Service during the World War, Mr. O'Connell joined Westinghouse enrolling in the company's graduate apprenticeship course. Upon completion of the course, he was transferred to the El Paso office as a salesman, which position he held until 1931, with the exception of one year as salesman in the Los Angeles office. He was then appointed manager of the Tulsa office.

In 1933 he received the appointment of industrial division manager in the St. Louis office.

Hill Heads Sam Glauber's Dealer Division

NEW YORK CITY—R. C. Hill has been appointed manager of the dealer division of Sam S. Glauber, Inc., distributor for Gibson electric refrigerators in the New York City area.

Sales Continue Declining Trend During October

Ten-Months Sales Total for Industry Estimated at 1,315,400 Units

By A. J. Cutting

DETROIT—Estimated world sales of household electric refrigerators to distributors and dealers by industry manufacturers amounted to 42,800 units during October bringing the 10-months total to 1,315,400. The sales wave which started with January and swept to new monthly records in each of the first five months subsided suddenly in June. June, July, and August figures were all slightly below the same months of 1933.

There was no decided slump until September, however, when the bubble broke and sales dropped to 34 per cent below the September, 1933, figure. With the exception of the low mark of 34,100 set in October, 1932, October sales of this year are the lowest recorded for any October during the past five years.

Although 1934 is by far the best year in industry history from the standpoint of unit sales, it appears certain that the 1,500,000 mark prophesied by industry oracles at the

(*Concluded on Page 6, Column 1*)

A.S.R.E. Holds 30th Conclave This Week

NEW YORK CITY—A busy three-day program has been scheduled for the 30th annual winter meeting of the American Society of Refrigerating Engineers, Wednesday, Thursday, and Friday of this week, Dec. 5, 6, and 7 at the Hotel New Yorker here.

Registration starts at 9 o'clock Wednesday morning, followed by the first session at 10 o'clock on "New Technical Problems," with A. R. Stevenson, Jr., president of the society, in the chair.

Speakers will be R. U. Berry of the air-conditioning department of General Electric, Schenectady, on "Air as a Refrigerant"; Philip Drinker and W. M. Pierce of the Harvard School of Public Health, Boston, on "Air Conditioning and Odor Control"; and A. D. Moore of the University of Michigan, Ann Arbor, on "Visual Heat Transfer Measurement."

The welcome luncheon that noon will be addressed by David Cushman Coyle, consulting engineer and mem-

(*Concluded on Page 2, Column 4*)

Kelvinmen Lay the Groundwork for Another Year's Activity in Refrigeration Selling

Top: (1) Willard French of Brooke, Smith & French, Kelvinator advertising agency. (2) District Manager Reau Kemp (left) and J. J. McIntyre, Kelvinator's department store manager. (3) H. W. Burritt, vice president in charge of sales, and (right) J. A. Harlan, commercial sales manager. (4) Utility Representative Ray Eshman (left) and Ed Schmidt of Toledo talk with Harlan. Bottom: (1) Distributor W. W. Huffman of Clarksburg, W. Va., enjoys some Book-Cadillac food. (2) Earle Rogers, Wheeling distributor (left), and Mr. Huffman. (3) Messrs. Eshman and Schmidt grin at some Harlan humor. (4) R. B. Maxwell (left) of Emmons-Hawkins Co., Huntington. (5) Sid Meyers (left) of ReDisCo and Ken Adams of Peoria do some tablecloth arithmetic.

Candid Camera Snapshots of a Kelvinator Banquet-Table Conference

Sid Meyers of ReDisCo (left) and Kenneth Adams of the Isaac Walker Hardware Co., Peoria, Ill., Kelvinator distributor, neglect their food to discuss time payment plans for next year.

Krich Adds Kelvinator Commercial Line

NEWARK—Krich Distributing Co. of this city, which until recently confined its refrigeration wholesaling activities to the Kelvinator household line, has established a new department to handle Kelvinator commercial equipment. Heading the new division is Donald T. Flynn, formerly with Kelvinator Corp. and Servel, Inc.

Sumet Corp. to Exhibit At A.S.R.E. Meeting

BUFFALO—During the annual A.S.R.E. convention at the Hotel New Yorker in New York City, Dec. 6, 7, and 8, the Sumet Corp. of this city will conduct an exhibit in the hotel of Sumet bronze bellows seal rings and connecting rod bushings.

Westinghouse to Use Seal Of Surgeons College

MANSFIELD—Westinghouse Electric & Mfg. Co. has received authorization from the American College of Surgeons to use that organization's seal of approval in refrigeration advertising appearing in ethical media directed exclusively to the medical and surgical professions and hospitals.

22,000 Refrigerators Sold in Cleveland

CLEVELAND — In the territory served by the Cleveland Electric Illuminating Co., dealers sold 22,000 electric refrigerators, 12,000 washing machines, 1,200 ironers, and 8,000 vacuum cleaners during the first nine months of this year, according to the Electrical League of Cleveland.

Hartford Utility to Give Free Power

HARTFORD, Conn.—Hartford Electric Co., as a part of its load-building program, has inaugurated an "objective rate" by which it gives free current up to five times the load volume of 5 or 10 kwh. per month voluntarily added by any domestic customer.

If, for example, a user boosts his usual load by 5 kwh., he gets free of charge an extra 25 kwh. per month; while he may add 10 kwh. and receive 50 free kwh. The utility's officials estimate that during the next year, 60,000 domestic customers may have free use of 36,000,000 kwh., valued at more than $1,000,000.

This system will run for one year, and if deemed successful, will be followed by a flat 3-cent rate.

Annual Convention of A.S.R.E. This Week In New York

(Concluded from Page 1, Column 5)

ber of the National Resources Board. He will speak on "The Capital Goods Fallacy."

The second technical session will be on the general topic "Refrigeration of Foods," with A. H. Baer, past president of the society, as chairman.

Talks will be given by A. W. Ewell of Worcester Polytechnic Institute, Worcester, Mass., on "Storage of Meat—A Review of Investigations"; by Gardner Poole, vice president of General Foods, Inc., Boston, on "The Advancement and Achievements of Quick Freezing"; and W. V. Hukill of the U. S. Department of Agriculture, Washington, on "Experimental Work on Fruit and Vegetable Transportation." The society's sound film "Refrigeration and Its Place in the Engineering World" with Mr. Stevenson as the spokesman will also be presented at this session.

Thursday morning, the third session will start with Harry Harrison of Carrier Engineering Corp., vice president of the society, in charge. Topic for the meeting is again "New Technical Problems."

Philipp Will Speak

Speakers will be L. A. Philipp, director of laboratories at Kelvinator Corp., Detroit, on "The Thermo-Physics of Liquid Refrigerant Controls"; D. C. Simpson of Owens-Illinois Glass Co., Newark, Ohio, on "Glass Wool Insulation"; and W. L. Knaus of General Electric, Schenectady, on "Effects of Dehumidification on Heat Transmission of Air with Extended Surfaces."

The regular luncheon meeting of the A.S.R.E. council and air-conditioning inspection tours of Bloomingdale's and the RCA building in Rockefeller Center complete the afternoon's program. The annual dinner dance—with special recognition of charter members of the society—is scheduled for Thursday night. Feature of the evening will be a one-act comedy, "Ah Frozen Wilderness," based on founding of the society in 1904.

Glenn Muffly, past president of the society, is chairman of Friday morning's session which will be devoted to the topic "Commercial Domestic Field."

Refrigeration in TVA

At this session W. R. Woolrich of Knoxville, Tenn., will speak on "Refrigeration in the TVA"; W. M. Timmerman of General Electric, Cleveland, on "Standards and Codes for Small Refrigerating Machines"; Siegfried Ruppricht of New York City on "Methods of Cooling Retail Beer"; and F. H. Steining of the University of Pittsburgh on "A New Refrigerant Control Device."

New York members of A.S.R.E. in charge of entertainment for the convention include A. W. Oakley, Crosby Field, I. E. McFarland, E. C. Soares, James Larkin, Paul Staples, John F. Stone, J. E. Fitzsimmons, C. H. Roe, C. F. Holske, Stephen Bennis, and L. L. Lewis.

The women's committee, which has planned a series of events for women guests, is composed of Mrs. A. R. Stevenson, Jr., Mrs. A. H. Baer, Mrs. G. E. Hulse, Mrs. H. D. Edwards, Mrs. E. C. Soares, and Helen H. Peffer.

Dealer Uses Electric Kitchen Idea in Tie Up with FHA Program

PASADENA, Calif.—Tying in with the Federal Housing Act the H. L. Miller Co., local electrical appliance dealer, got good results from an all-electric window in which a Westinghouse electric refrigerator centered the group, the appeal being made on the fact that the whole group could be purchased for $15 per month and came under the FHA loan provisions.

The refrigerator was priced at $144; the electric range at $155; the water heater at $120; the mixer at $22; and the cooker at $11—a total of $552.

The window as a whole had a kitchen setting with linoleum floor and tile walls, tile pattern oil cloth being used to give the tile effect. The reference to FHA provisions was presented on a wall panel, and FHA booklets strewn on the floor. Emphasis was also placed on the fact that the installation of the group insured a minimum electric rate of 1½ cents per kwh.

The window display supplemented a two weeks promotional campaign. It led to a few direct group sales and started the wheels moving toward a large number of modernization jobs.

Beller President of Essex League

NEWARK—New president of the Essex Electrical League here is Robert Beller, vice president of the Beller Electric Supply Co. He succeeds John Caffrey, Jr., who held the office during the past year.

At the annual election, R. H. Osgood was made vice president, while F. A. Hickey was elected treasurer and J. H. Stapleton secretary. Mr. Caffrey and P. H. Harrison were appointed delegates to the New Jersey Council of Electrical Leagues. Elected to the executive committee were W. T. Edgell, Jr., and Elmer D. Wilson.

G-E Directors Declare Dividends on Stock

NEW YORK CITY—Board of directors of General Electric Co. at its meeting here Nov. 23 declared the one hundred forty-ninth dividend on common stock and the forty-ninth dividend on special stock, payable to stockholders of record on Dec. 28.

ANOTHER GENERAL ELECTRIC DEALER DOUBLES HIS BUSINESS

G-E dealer H. S. McKeown's General Electric Kitchen Coach, one of the many G-E sales vehicles he finds effective in boosting his business on General Electric Refrigerators and other G-E Kitchen Appliances.

H. S. McKeown, General Electric refrigerator dealer at Spartanburg, South Carolina. Read his interesting letter below.

THE G-E KITCHEN COACH is one of many business-getting plans offered to retailers of General Electric Refrigerators and other G-E Kitchen Appliances. Aggressive dealers find it an invaluable sales builder. It enables them to *go out* after new business instead of waiting for it to come in. H. S. McKeown, General Electric dealer in Spartanburg, So. Car., says:

"My territory consists of many small mill towns and I figured the coach would be an ideal way to show the people what we have to offer. I put one of my men in charge of the coach as regular 'sales pilot.' In 6 months he *more than doubled his business* over the corresponding period. We had to put on another truck and delivery crew exclusively for handling his sales.

"Many of the people contacted by the coach never come to Spartanburg and, like Will Rogers, about all they know is what they read in the papers. The coach gives the entire family a thrill as they contrast their own kitchen with the magic kitchen before their door. The prospect is able to both see and feel the actual article she is considering. This in itself creates a desire for ownership that often results in making the sale.

"By using the coach the salesman is able to sell other G-E Kitchen Appliances as well as refrigerators, which adds materially to his and my income. Everywhere the coach goes it builds good will for my store. In actual dollars and cents increase in my business attributed to the coach, I already have a 300% return on my investment."

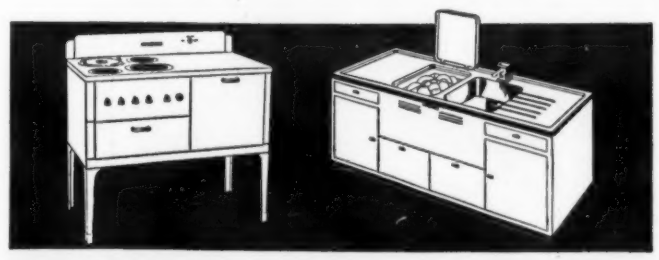
No wonder General Electric refrigerator dealers have the inside track on greater net profits and a steadily growing business—with the best known electric refrigerator in the world—with effective sales support like the General Electric Kitchen and Kitchen Coach—and with the backing of the greatest name in electricity! Aggressive dealers are invited to write for details of the General Electric franchise. General Electric Company, Specialty Appliance Sales Department, Section DF121, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC

REFRIGERATORS • RANGES • DISHWASHERS

A GENERAL ELECTRIC REFRIGERATOR FOR EVERY HOME, EVERY INCOME

Electric refrigerator shoppers can see *all three styles* at the General Electric dealer's—the famous G-E Monitor Top with its matchless mechanism—the beautiful G-E Flat-top with its distinguished styling—and the sensational new G-E Liftop at $77.50 (plus freight and $5 for 5 year protection plan). There's a General Electric model, size and price for every home, every income.



Every General Electric refrigerator owner is a preferred prospect for *all* the appliances in the complete General Electric Kitchen. General Electric refrigerator users are *satisfied* customers. They are buying General Electric Automatic Ranges and General Electric Dishwashers. The General Electric dealer can make 3 or more profits per customer! Write for details.

COMPANION MERCHANDISE

May-Stern Uses Club Plan to Sell Radios

CINCINNATI — May-Stern & Co., Crosley dealer here, has launched a club plan to promote radio sales, according to Martin Mandelker, general manager of the store. This particular plan originated with the May-Stern store in Pittsburgh some years ago, and is being used there and by Stern & Co. in Philadelphia.

Known as the May-Stern Radio Club, it entitles members to 10 so-called privileges, without additional charge. They are as follows:

1. In event of death, the unpaid balance is cancelled; the radio becomes the property of your heirs.
2. If the radio is destroyed by fire, the unpaid balance is cancelled—no further payments need be paid.
3. Instant replacement of your radio if damaged by any electrical disturbance while in your home, within a one-year period.
4. Privilege to exchange for any other radio within 30 days.
5. Member's tubes will be meter tested by May-Stern any time within a one-year period without charge.
6. The radio is fully guaranteed for one year against all defective parts and workmanship (excepting tubes).
7. Membership in May-Stern's Honor Roll Club. (Members of the Honor Roll Club are customers who have paid their accounts satisfactorily and whose credit is good).
8. Tubes are guaranteed for 90 days.
9. Radio installed in your home and attached to your aerial.
10. Ninety-day free service on any radio purchased.

The certificate is registered and is not transferable. All privileges are void if the account is not paid regularly in accordance with the customer's agreement.

Trilling & Montague Uses Group Selling of Burners

PHILADELPHIA—Trilling & Montague, local distributor of major electrical appliances, inaugurated "group selling" of oil burners to prospects at a social event held Monday night, Nov. 26, in the main ballroom of the Bellevue-Stratford hotel.

More than 1,000 prospects attended, according to David M. Trilling, head of Trilling & Montague. The meeting consisted of a program lasting for an hour and a half, followed by dancing and bridge.

The Automatic Burner Corp. inaugurated this type of sales activity recently in Baltimore.

Utilities Told How to Sell New Type Reading Lamps

NEW YORK CITY—Commercial executives of utilities the country over are receiving from the National Better Light—Better Sight Bureau here a pamphlet of pointers on selling the new study and reading lamps introduced by some companies since opening of the Better Light—Better Sight campaign.

It is intended that the instructions be passed on to utility and dealer salesmen, who have never before sold lamps similar to this model. It follows specifications of the Illuminating Engineering Society and in design is somewhat unorthodox.

The lamp combines direct light with soft diffused indirect light, its bulb being enclosed in a white glass bowl which cuts out glare and shadows and diffuses light evenly. Not even at the top is there a glare. The socket is so placed as to give a minimum of light.

Shade is of the right width, angle, and height to spread light over an entire table or desk top, and inside is finished to reflect all the light possible. The stand is of a height which permits light distribution over the entire table top and prevents glare from the open top.

The bureau's instructions point out that salespeople should sell this lamp on the basis of sight protection, not price, and that it is the start of a new trend in more scientific lighting, not just a faddish shot in the arm to help the lighting industry.

5,381 Electric Ranges on Lines of Hartford Electric Co.

HARTFORD, Conn.—There were a total of 5,381 electric ranges in service on the Hartford Electric Light Co. power lines on Sept. 15, according to a recent report made by the utility.

This represents a saturation of about 16 per cent among residential customers, the power company declares.

In recent months the Hartford Electric Light Co. has been trying out a plan of encouraging trial installations by waiving the cost of wiring in exchange for an old cook stove of any type or make.

In the first four days that this was tried, 32 ranges were ordered, as against 16 in the entire previous week.

Comparing Performances

Harold W. Arlin (left), pioneer radio announcer, and Lowell Thomas, news commentator, compare a new Westinghouse all-wave radio with a pioneer receiver.

Tung Oil Production May Boost Farmer's Incomes in South

CINCINNATI—A new industry—production of tung oil—is springing up in the south, and bids fair to boost farmers' incomes and make the rural market more profitable for sellers of electrical merchandise, says C. A. Cooper, Crosley district manager covering Georgia, Florida, Alabama, and Tennessee.

"Tung oil is produced from the nut of the tung tree and is used in the manufacture of paints and thinners. It is becoming one of the fastest growing industries in the south, particularly in southern Georgia and northern Florida, and we will hear much more about it within the next 12 months," he explains.

The district man comments that practically all the cotton crop is in and farmers will shortly realize finances from sale of it. The crop was good and prices are fair, and Mr. Cooper expects this to boost radio sales, especially of battery sets in the rural areas.

"A good volume of radio sales is expected through December, and indications point to a good refrigeration season which will begin in this territory about Jan. 1."

Maytag Shows Profit of $1,470,459 in 9 Months

NEWTON Iowa—For the nine months ended Sept. 30, the Maytag Co. of this city reports a net profit of $1,470,459, after depreciation, federal taxes, and other charges, as compared with a $670,990 profit for the same period of 1933. This excludes figures on operation of the company's Canadian subsidiary.

Net profit for the quarter ended Sept. 30 was $423,885, compared with $594,779 in the corresponding period of last year. For the first nine months of this year, net sales were $11,692,097.

Penn Switch Closes Series Of Temtrol Meetings

DES MOINES — Second series of Temtrol dealer meetings, sponsored by the Penn Electric Switch Co. to introduce its new system of automatic temperature control, was concluded with a meeting at the Hotel Pere Marquette, Peoria, Ill., Nov. 26.

During the second series, nearly 2,000 dealers, service men, and salesmen attended, according to Ben L. Boalt, who was in charge of the meetings starting Aug. 27 in New York City. Total attendance was 5,000.

Standard Builds Gas & Electric Range

TOLEDO—Standard Electric Stove Co. has developed a combination gas and electric range for application in territories where gas burners are desired as auxiliary equipment.

The new range, known as model 1450G, has four electric burners and two gas burners, an electric oven, and an electric food warmer.

'Wheaties' Skit Features Stewart-Warner Radios

CHICAGO—As a means of "spotlighting" the features of the new Stewart-Warner radio receivers—50 of which are to be given as prizes in a forthcoming contest—General Mills, Inc., makers of Wheaties, have given the Stewart-Warner radio an important part in the actual plot of the Jack Armstrong radio program.

In the course of the dramatic action Betty Fairfield, heroine in the program heard five times a week, becomes afflicted with a strange malady which will require the skill of a certain surgeon if she is to survive. It develops that the famous doctor is thousands of miles away from the scene of the immediate action—doing research work in the Arctic. He has a small short-wave radio sending set with him, but it is impossible to get his messages on an ordinary receiver. Through a friend, Jack Armstrong hears about the Stewart-Warner set and with its aid the doctor directs treatment.

Immediately after this plot sequence the commercial announcements on the Jack Armstrong program gives the details of the contest wherein 50 Stewart-Warner radios—just like Jack Armstrong's—will be given away.

Court Decision Puts Oil Burners Under N.Y. Fire Department

NEW YORK CITY—In a decision handed down Nov. 14 by Justice Furman of the Supreme Court of New York, the newly organized National Oil Burner Dealers Association won a victory which releases hundreds of dealers in the five boroughs of New York from interference of the Building Department of New York and which places sole jurisdiction in the hands of the Fire Department.

Upholds Dealers' Contention

"This decision, upholding our contention that the building commissioners had no right to place violations against installations approved by the fire department, means freedom for the dealer from political interference," stated A. W. Clark, executive director of the NOBDA. "It can be estimated that sales totalling close to 10,000 units have been upheld in the past seven months as the result of so-called violations imposed by the building department over approval given by the fire department."

The association used Baerenklau & Co. of Brooklyn as a test case and obtained a peremptory writ of mandamus against Edwin Thatcher, building commissioner of Brooklyn, restraining him from any action until the matter could be reviewed by the Supreme Court for a decision.

Decision of Judge

The decision handed down by Justice Furman reads as follows:

"In re Baerenklau—Motion for a peremptory order of mandamus directing the commissioner of buildings to remove and cancel a violation heretofore placed upon certain premises, and the notice to remove such violation heretofore served. It appears that the petitioners installed an oil burner in said premises and procured a permit from the fire department. The commissioner of buildings claims that the petitioners were by law required to call upon him for an inspection of the installation.

Question of Jurisdiction

"The question presented is whether or not the fire department or the commissioner of buildings has sole jurisdiction of this function. There is no question but that the fire department originally had jurisdiction of a matter of this kind. However, the commissioner of buildings contends that the McCall Bill recently passed by the Legislature, transferred such matters to his jurisdiction.

"I have carefully reviewed the provisions of the McCall Bill as well as the earlier statutes relating to this matter. While it is obvious that the McCall Bill was passed for the express purpose of eliminating overlapping functions of the fire department and the commissioner of buildings, nevertheless, I do not believe that the Legislature ever intended to allow the latter to usurp a function which in its very nature so obviously comes within the jurisdiction of the fire department. The application is therefore granted."

LAST YEAR...WE SAID THIS NEW LINE WOULD BE A SENSATION

Now IT'S CALLED...

THE LINE WITHOUT A "SERVICE PROBLEM"

Facts That Mean More Money for You in 1935

With the announcement of the Stewart-Warner Refrigerator we promised that this new line would be the sensation of the industry — that the product was "right" — had the eye appeal, the engineering background, the features that would make a "hit" with consumers — that we had a PROFITABLE REFRIGERATION PLAN for retailers . . . Our pledge has been redeemed!

In twelve short months, powerful national and local advertising — intelligent, hard-hitting merchandising — has put Stewart-Warner in an important position in the field! It has made an outstanding sales record with retailers everywhere and proved that it can "deliver the goods" in actual home use under any conditions. Ask any dealer handling two lines — Stewart-Warner and some other — about comparative dependability—freedom from service—let him tell you how Stewart-Warner performance has taken the "service problem" out of the picture.

The success of the Stewart-Warner Refrigerator in 1934 has set the stage for even wider acceptance in 1935. With a trouble-free, twin-cylinder mechanism that has set a "new high" for dependability, and a host of *new features*, the line for 1935 will be a "standout from every standpoint." So make no commitments, no promises until you see what Stewart-Warner has to offer.

NRA CODE

STEWART-WARNER CORPORATION
1841 Diversey Parkway
Chicago, Illinois

You'll get the whole story shortly!

STEWART-WARNER

New-Type ELECTRIC REFRIGERATOR

Industry Sales Show Decline in October

(Concluded from Page 1, Column 5)

beginning of the year will be too large an order to fill. Even if November and December of 1934 are as satisfactory in volume as were those months in 1933, the sales total will fall short of the forecasted mark by better than 100,000 refrigerators.

However, with the sales momentum gathered during the early months, the industry is riding high with the 10-months total for 1934 about 30 per cent ahead of the same period of 1933 when 1,013,500 units were sold, and nearly 22 per cent higher than the 12-months total of 1,080,700 refrigerators for 1933.

Estimated exports in October totaled about 14,000 refrigerators, being higher than in any previous month of the year. Sales in United States, only, amounted to 28,800 units bringing the total for 10 months to 1,212,400.

Thirteen members of the Refrigeration Division of the National Electrical Manufacturers Association (Nema) sold 37,854 household units during the months of October, boosting Nema sales for 10 months to 1,162,829, or about 88.4 per cent of the industry total. This 10-months figure is 36 per cent above the 852,589 refrigerators sold by the Nema companies in the same period last year, and is 28 per cent greater than the Nema total for the year 1933 when sales reached 909,055.

United States sales by Nema manufacturers amounted to 25,427 refrigerators during October bringing the cumulative domestic total to 1,071,714. Exports during October totaled 12,427, this being the highest export figure for any months of the year.

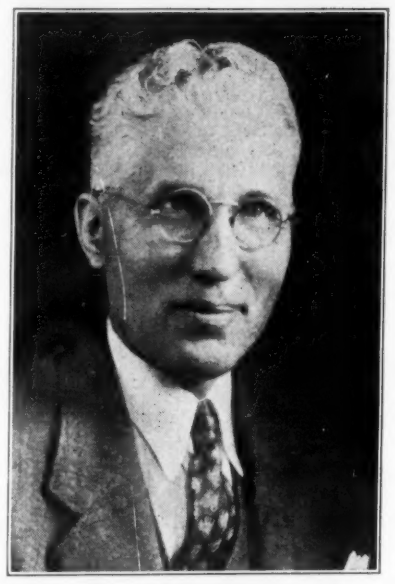
Members reporting sales to Nema for October were Crosley, Frigidaire, General Electric, Gibson, Kelvinator, Leonard, Norge, Servel, Stewart-Warner, Sunbeam, Uniflow, Universal Cooler, and Westinghouse. The Nema figure includes units manufactured by member companies for Major Appliance Corp., Montgomery Ward & Co., Potter Refrigerator Corp., Sears, Roebuck & Co., and Truscon Steel Co., but does not take in sales by Apex, Jomoco, Merchant & Evans, and Sparks-Withington, Nema members who did not report.

The complete summary of Nema sales for October will be found on page 14 of this issue.

Greer Develops Handy Pressure Chart

CHICAGO—Greer College of Refrigeration and Air Conditioning has developed a handy refrigerant pressure-temperature table on a pocket-sized aluminum card. The table gives pounds pressure or inches of vacuum in five degree temperature steps from minus 40° F. to plus 120° F. for Carrene, methyl formate, F-11, ethyl chloride, F-114, butane, isobutane, sulphur dioxide, methyl chloride, Freon, ammonia, and carbon dioxide. All students enrolled in the school receive the chart.

Branch Manager



G. E. ROGO

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Rogo Heads Chicago Kelvinator Branch

(Concluded from Page 1, Column 3)

automatic heating, and air-conditioning equipment. Extent of the territory to be covered by the branch is as yet indefinite.

Mr. Rogo spent 10 years as assistant treasurer of Kelvinator and three years as district manager for Leonard Refrigerator Co. He joined Kelvinator in July, 1921. As a financial representative of the management, he has had much to do with establishing several Kelvinator branches, including those in New York and Boston.

Since the fall of 1931, Mr. Rogo has been with Leonard as manager of the New England sales territory. A. E. Cadwell, formerly with Kelvinator's Boston branch, will head the new outlet's commercial division.

Bailey Heads Biehl's Refrigeration Sales

POTTSVILLE, Pa.—G. L. Bailey has been appointed refrigeration sales manager of Biehl's Auto Parts, which was recently franchised as Kelvinator distributor in this territory.

Mr. Bailey was at one time associated with the Columbia Graphophone Co. as its traveling sales promotion manager, then became district manager for Grigsby-Grunow Co. More recently he was connected with the Peirce-Phelps distributorship in Philadelphia.

Wrasmann Will Manage Trane Branch

ST. LOUIS—George E. Wrasmann, manager of the Trane Co.'s St. Louis branch, has recently moved his office to 1218 Olive St.

How To Service Orphan Refrigerators

For the information of service men, detailed authentic instructions for servicing various makes of "orphan refrigerators—published in recent issues of Electric Refrigeration News—are now available. Eleven popular makes are covered in this series. A limited number of extra copies of all 21 back issues containing these articles are available. A package made up of the 21 copies of the News (as listed below) will be mailed postpaid on receipt of $2.00.

Absopure Commercial

Drawings and service data on both Series E and F Absopure compressors, also of the Absopure float, header assembly, oil gauge, discharge and intake valves, and expansion valve. (July 18, 25, & Aug. 1, 1934.)

Allison Household

Detailed service instructions, with views of the two-stage compressor, float valve, flooded evaporator, check valve, etc. of this early household machine using ethyl chloride. Analysis of service calls. (May 30 & June 6, 1934.)

Belding-Hall Electrice

Operating cycle of the high-side float system using sulphur dioxide and the unique Electrice gear pump compressor. Drawings of service manifold, cast-iron cooling unit, thermostat, and electrical wiring. (Aug. 22 & 29, 1934.)

Holmes Household

Complete description of the ethyl chloride system built by Holmes Products, Inc. Illustrations of the compressor, float valve, charging valve in three positions, check valve, circuit breaker, and cooling unit, and service helps. (Oct. 10, 17 & 24, 1934.)

Iceberg Household

Service helps on Iceberg self-contained household refrigerators and water coolers, both of which used a reciprocating compressor and methyl chloride. (Aug. 8, 1934.)

Majestic Standard

Operating cycle, section of compressor, suction and discharge valves, float valve assembly, control assemblies, thermostat, and method of installing evaporator illustrated in a series of three lengthy articles on Grigsby-Grunow's conventional "open" type refrigerator. (Sept. 12, 19 & 26, 1934.)

Majestic Hermetic

Detailed description of all the principal parts of Grigsby-Grunow's hermetically sealed units, and instructions for all service operations which may be conducted in the field. (Aug. 16, 1934.)

Rice Household

Data on the Rice household machines in which methyl chloride was the refrigerant. Discussion of common service troubles encountered with the capillary tube. (July 4, 1934.)

U.S. Hermetic

Service discussion of the direct-driven, sulphur dioxide hermetic machine built by the U. S. Radio & Television Corp. Phantom view of the refrigerating unit and electrical wiring diagram. (Aug. 15, 1934.)

Wayne Household

Description of all major parts in the Wayne household machine, and instructions for performing all common service operations. Illustrations of the complete system, double-seated valve assembly, section of the compressor, and expansion valve. (July 11, 1934.)

Welsbach Household

Complete treatise on the Welsbach ethyl chloride household machine, with illustrations of compressor, expansion valve, receiver valve, condenser shut-off valve, compressor inlet valve, thermostat, and two types of Welsbach controls. (June 13, 20 & 27, 1934.)

Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

Fake Subscription Collector Defrauds Dealers in Illinois

Notices have been published in recent issues of Electric Refrigeration News regarding a fake subscription agent who has been calling upon refrigeration men in various towns of Illinois and Wisconsin and representing himself as an authorized collector for Electric Refrigeration News.

In Peoria, Ill., on Sept. 17, 1934, a man going by the name of Roger Hooker collected money from three members of the Koren Appliance Co. and issued a stock receipt rubber stamped with the name of "Trade Press, Kansas City, Mo."

This imposter offered a one-year subscription to Electric Refrigeration News together with a copy of the Refrigeration Directory for a total price of $1.50, whereas the actual cost of this combination is $5.00 and no such rate as that quoted by Hooker has ever been authorized by this publication.

The Trade Press Bureau, professional subscription agency, located at 615 Ridge Bldg., Kansas City, Mo., disclaims all knowledge of said Roger Hooker. They point out that they furnish all of their agents with a specially printed and serially-numbered receipt blank designed for each individual publication on their list. Furthermore, the Trade Press Bureau has forwarded to us a complete list of the publications which they represent and Electric Refrigeration News is not so listed.

On Oct. 5, the same or another fraudulent agent collected $1.00 from a dealer in Springfield, Ill., for a six-months' subscription to Electric Refrigeration News. The correct rate for this period is $1.50. This man, claimed to be a representative of the Associated Trade Press, 9 S. Kedzie Ave., Chicago, Ill.

Needless to say, none of these subscriptions, or payment for same, has reached the office of Electric Refrigeration News.

Readers are hereby warned against paying money to strangers who may claim to be representatives of this paper. Electric Refrigeration News has no subscription agents in the field. All subscription business is handled direct by mail. The names of all members of the staff who travel and call on the trade are printed in the masthead which appears at the top of the editorial page in each issue of the paper.

High Percentage of Michigan Farms Have Electricity

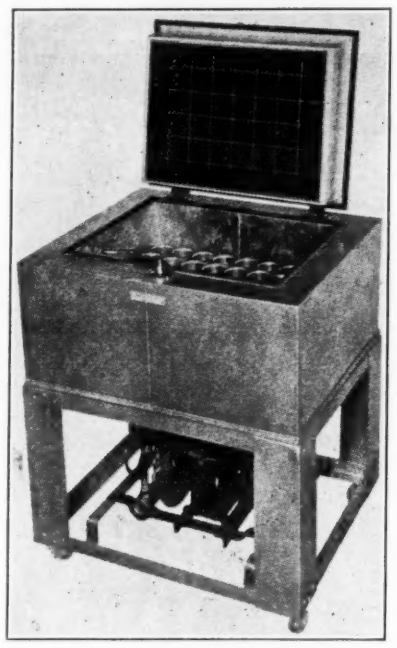
ANN ARBOR, Mich.—Residents of this state who read the advertising folder, "Toward an Electrified America," put out recently by the Electric Home & Farm Authority have since learned that the TVA came all the way to Michigan to find a picture illustrating farm lighting with electricity.

Under the heading, "For Farm Families Cheap Electricity Opens the Door to Modern Life," is shown a night photograph of the John Miller farm in Macomb county near Utica. The photograph was taken entirely by means of the farm's own electric lights.

Macomb is the most completely electrified county in Michigan. The 1930 U. S. Census showed that 2,223 of its 2,951 farms had electric service, a percentage of 75.33. Since that time more than 600 additional farms have been connected with power lines, bringing the percentage of electrified farms up to better than 95 per cent.

Michigan had 39,110 electrified farms as of Jan. 31, 1933, or 23.1 per cent of all farms in the state. More than 3,550 additional farms have been given service thus far this year, sending the percentage of electrified farms in Michigan above 25 per cent, according to the Utilities Information Bureau. In 1925, 6,800 Michigan farms had electric service.

Industrial Job



Low-temperature cabinet designed by Jewett for use in treating aluminum alloy rivets.

M. I. T. Opens Course In Refrigeration

CAMBRIDBE, Mass.—M.I.T.'s evening course in household and commercial electric refrigeration started this year on Nov. 23, according to John G. Praetz, instructor in mechanical engineering at the Massachusetts Institute of Technology, who is conducting the course. Classes will be held from 7:30 to 9 o'clock on Friday nights for eight successive weeks.

The first part of the course is devoted to household refrigeration, with discussions of regulation systems, refrigerants, compression and absorption units, installation, controls, adjustments, service, charging and discharging refrigerant, charging oil, changing coils and compressors, purging, and diagnosis and correction of service complaints.

Part II of the course treats commercial refrigeration, with lessons on types of installations, mechanical and electrical controls, operation, installation, and adjustments of General Electric, Frigidaire, Frick, and Kelvinator equipment, with a concluding lesson on beer cooling systems.

NRA Approves Freezer Complaints Group

WASHINGTON, D. C.—NRA has given conditional approval to the procedure for the trade practice complaints committee of the counter-type ice cream freezer industry, and has approved the committee's organization. It has also decided that this committee for the refrigerating machinery industry shall consist of members of its Code Authority.

Committee for the counter-type freezer group includes L. G. Blessing, Bastian-Blessing Co., Chicago; Harold C. Wilmarth, Russ Soda Fountain Co., Cleveland; C. S. Clark, Code Authority secretary, Chicago; and Prof. D. J. Duncan, administration member of Code Authority, Evanston, Ill.

Jewett Builds Unit To Treat Aluminum Rivets for Aircraft

BUFFALO—For treating aluminum alloy rivets used in the manufacture of aircraft, the Jewett Refrigerator Co. has built a number of special top-opening, portable, low-temperature electric refrigerators, according to Edgar B. Jewett, president of the company.

Solid carbon dioxide has been used to some extent for this purpose, Mr. Jewett states, but electric refrigeration has been found to be cheaper as well as holding a more constant temperature.

The Jewett outfit is equipped with 48 individual containers of about 19 cu in. capacity. These containers are partially submerged in a bath of a non-freezing solution held at a predetermined temperature, usually zero, by a ⅛-hp. refrigerating machine installed in the base of the refrigerator.

Mounted on the inside of the door of the refrigerator, as shown in the illustration, is an index board upon which the various sizes of rivets are recorded in correct relation to the corresponding position of the cups. The index is removable for remarking.

The refrigerators stand (on casters) 36 in. high, occupying a floor space of 31½ by 26½ in. Walls of the cabinet are insulated with corkboard, and all metal seams are sealed against air leakage into the insulation. Power consumption of the equipment is about 5 kilowatt per 24 hours, Mr. Jewett states.

G-E Equipment Placed In 4 Universities

WASHINGTON, D. C.—During the past few weeks L. B. Perkins, commercial salesman for National Electrical Supply Co., General Electric distributor here, has made installations in three of Washington's four universities—University of Maryland, Georgetown, and Catholic Universities.

To the University of Maryland he sold "Conditioned Air" refrigeration for the first two of a bank of eight testing rooms, remaining six of which are under construction.

Bacteriological department of Georgetown University medical school selected G-E refrigeration for storage of test tubes, and the installation in Catholic University consisted of a CS-450 in the cafeteria, a CS-270 for Woodside School, now under construction, and a CS-270 with ice-making evaporator for Notre Dame Convent of Catholic University.

Mr. Perkins also recently sold a refrigeration system to the S & W chain's new Washington cafeteria, and placed G-E storage-type water coolers in two other local cafeterias.

New Bottle Rack Designed For Household Cabinets

ALBION, Mich.—A bottle rack for use in household electric refrigerators is being introduced by the Union Steel Products Co. of this city. Made of steel wire, the device holds 11 bottles in two rows, and fits between two of the refrigerator shelves.

40.3% of Non-Owners in Norge Survey Intend to Buy in 1935

(Concluded from Page 1, Column 3)

the survey being conducted on a similar pattern, by identical methods and in as broad gauged a manner as that of last year.

In this study, among other things, the same question was asked that of last year: "Do you intend to buy an electric refrigerator in 1935?"

From answers to this, according to Mr. Blood, it is found that 40.3 per cent of non-owners have either definitely decided to buy or hope to be able to purchase an electric refrigerator next year. This declared buying intention compares with that of 32.2 per cent last year; indicating that 8.1 per cent more intend to buy than last year.

More Business this Year

"This year's prediction of buying intent was predicated on the opinions of 12,718 non-owners while the 1935 prediction is based on personal interviews among 10,324 non-owners," declares the Norge chief executive. "It is well known that above the level of 5,000 interviews, if properly scattered to reflect territorial conditions, a reliable general basis of prediction is struck in which the plus or minus variant thereafter will scarcely ever waver to any appreciable extent.

"Comparing the 1935 percentage of buying intent with that developed from last year's survey, it is found that 18.6 per cent of non-owners are definitely determined to buy in 1935 while 15 per cent were thus positive in their intent for 1934.

"Similarly, 21.7 per cent hope to be able to buy in 1935, while 17.2 per cent had a similar hope in last year's study."

In establishing a basis for an actual unit prediction for 1935, Mr. Blood made some revisions based on a better knowledge of market and economic conditions growing out of the progress of events during 1934. He explains these as follows:

The 'Saturation' Problem

"It seems that only about half the families of the country ever want any home appliance. Beyond the point of 50 per cent saturation, resistances set in which make the cost of inducing remaining non-owners to buy greater than the profit to be derived from such purchases. For example, the vacuum cleaner market, after years of the most intense direct selling, has never been able to crowd over the 50 per cent saturation point.

"However, there are some appliances that have done it. Analysis of the instances in which this has been accomplished indicates that the chances of any product to go beyond the 50 per cent saturation point depends upon its ability to produce a 'pleasure' as well as a utilitarian advantage.

'Pleasure Appeal' Is Factor

"It is increasingly evident that the public appreciate the pleasure appeal of electric refrigeration, as well as its use values. For that reason, it has much of the appeal of an automobile or radio; both of which have reached much higher saturation points than 50 per cent.

"Further, there is a noticeable social drift back to the enjoyment of homelife and a strong elective preference for electric refrigeration, compared to other home appliances. It is reasonable to assume that the electric refrigerator market can reach a 70 per cent saturation point, particularly since it is a product that can be financed from the savings it creates; thus bringing it within the price range of the lowest-incomed family.

"From all of this, I have changed the basis of prediction this year from 50 per cent to 60 per cent as a safe saturation point to estimate upon. In doing this I assume a more efficient and effective type of selling direct to the home, without which my ensuing volume prediction for 1935 cannot be attained.

"Last year's prediction was based upon 5,170,000 electric refrigerators in use and a saturation assumption of 25.4 per cent. Authoritative estimates of ownership as of Jan. 1, 1934, place the figure at 4,900,000 units to which should be added 1,510,000 units, the probable actual sales of 1934; a total of 6,410,000 units in use.

Importance of Obsolescence

"Here, I might point out that there is a noticeable obsolescent factor creeping into the market, as reflected in our 1935 Norge marketing survey. A greater percentage of new sales are indicated as replacing older electric refrigerators owned than were noticeable last year. The rapid strides that have been made in design performance and convenience features are inducing replacement desire.

"Further, many 1924-1929 buyers made the error of selecting cabinets possessing too little food storage space, thus limiting use savings. Increase in food prices, during the past few months have made the deficiency noticeable and this, in itself, is creating a strong urge for replacement.

Obsolescence Factor 10%

"Personally, I feel that there is an obsolescent factor of 10 per cent, or 490,000 units, now present in the market. But I have not taken obsolescence into account in next year's volume prediction—rather, I have considered it a safety factor to protect any variable in my estimate that might reasonably occur.

"There are 19,843,000 wired homes in the United States, based on latest data. A 60 per cent saturation point, permits a foundation for estimate of 11,105,800 electric refrigerators of which 6,410,000 units have been sold; leaving a non-owner basis of 5,495,800 and a present saturation of about 31 per cent, as compared with 25.4 per cent last year. In other words, as I see it, the electric refrigerator market is poised in the middle of its expansion cycle.

Figured on 'Buying Intent' Basis

"Based on 5,495,800 non-owners, a positive buying intent of 18.6 per cent, and a probable buying intent of 21.7 per cent—my prediction for 1935 is that 1,022,218 units will be sold to those who are definitely determined to buy, and that an additional 1,192,588 units can be sold to those who hope to be able to buy. This totals up to an estimate of 2,214,806 electric refrigerators that are likely to be bought in 1935; representing an increase of 47 per cent over this year's record total.

Mr. Blood, in checking the results, of the survey, points out the unerring sense which appliance dealers seem to have of the business outlook. For instance, while his estimate for 1934 refrigerator volume, developed from the Norge consumer study was 48 per cent, dealers reported an average increase in sales expectancy of 49 per cent. Similarly, in predicting a 47 per cent increase for 1935, he finds dealers in close accord with an average expectancy increase of 44 per cent. The 1,042 dealers interviewed in this year's survey are of all types and not merely Norge dealers, Mr. Blood makes clear.

Declare for Leading Makes

"It is interesting to know that while the percentage of probable purchase declared for brands other than the leading five electric refrigerator companies (Frigidaire, General Electric, Kelvinator, Westinghouse, Norge) was 21.2 per cent in the 1934 prediction, it has fallen to 18.9 per cent in this year's survey of 1935 buying intention," said Norge's president.

Gilmer Adds Space for V-Belt Production

PHILADELPHIA—To step up production in V-belts and Kable Kord belts, the L. H. Gilmer Co. here is increasing the space given over to manufacture of these products. For the past year, three eight-hour shifts have been operated, and more men are being put to work now.

M. Glen Miller Obtains Scientific Corp. Account

CHICAGO—M. Glen Miller, advertising agency here which has the Dry-Zero account, has been appointed to handle advertising for General Scientific Corp. of Chicago, maker of Q. R. S. neon signs, Lumotron vacuum products, and Graf cameras and lenses.

PERSONALITIES

By George F. Taubeneck

Lions for Prospects

Down the street about a block and a half from the new home of the Business News Publishing Co. is a spot which is infested with Lions. They're dangerous, too—big, well-muscled, lithe, pouncey, and quick as the proverbial cat. All fall they've been down there, and all fall they've had us fascinated.

We refer, of course, to the Detroit Lions professional football team, which is quartered at Webster Hall hotel.

As all you addicts of the sports page know, the Lions were runners-up to the Chicago Bears in the western division of the National Professional Football League this season; and inasmuch as both the Lions and the Bears cleaned up all the eastern division teams, they can logically claim to be the best two professional football teams in the world.

That means that they are the two best football teams in the world, for almost everybody admits that professional football is far in advance of the collegiate variety.

(TIM MARA, owner of the New York Giants football team, has a standing wager of $10,000 that any of the top five professional teams could take on any of the five best college teams of the year and make more touchdowns than the college team can earn first downs.)

Catching your eye on this page are pictures of the Lions and the Bears in their memorable Thanksgiving Day battle, which the Bears won, 19 to 16, with half of Detroit swarming over the University of Detroit stadium and the other half toasting tootsies by the fireside radio at home. It was the first professional football game ever to be broadcast over a nation-wide hook-up.

Some of the players in these pictures you will probably recognize, for they come from all parts of the nation, and most of them were All-Americans or all-something-or-other during their college days.

Most interesting to us is the fact that nearly all of the Lions are comparative newlyweds. Three of the five remaining bachelors on the squad are to be married this winter. What's the significance of it all? Simply this:

These young men are making very good money. Without exception they have married young, healthy, extremely pretty young women. Nearly all of them plan to set up their homes in Detroit. They have incredibly enormous appetites. Catch on?

Right the first time: They should be excellent prospects for electric refrigerators. SYD CASWELL, R. F. CALLOWAY, DAVE BURKE, LEONARD TURNBULL, BILL HOWLETT, CHARLIE STRAWN, R. W. WALSH, J. E. AITKEN please note.

* * *

Sam Vining

Ever since the last time V. E. VINING, manager of department store refrigeration sales for Westinghouse, was in town, we've been waiting for an opportunity to relate a story about him.

"Salesman Sam" VINING is almost a legendary character around the industry—although he himself will assure you, vigorously and with emphatic gestures—that he is still very much alive and kicking.

Legendary he is, though, because of the stories which have been circulating about his prowess as an inspirational leader of salesmen. Hence this new story should be news. First we'll tell it, and then you can read about the bright idea the new Westinghouse appliance advertising manager, SID MAHAN, had with regard to "Sam."

Calling upon Mrs. Prospect, Sam puts himself in a visiting frame of mind and soon has the unsuspecting lady regaling him with some of her social activities.

"Sam's" quick ear picks up the name of a Westinghouse owner. And he remarks casually, 'Your friend, Mrs. Smith, has a Westinghouse; ask her what she thinks of it.'

The next time Mrs. Prospect sits down with her friends for a game of bridge she recalls "Sam's" request and says, "Oh Mary! A salesman by the name of Mr. Vining tells me you have a Westinghouse and that you're crazy about it. Are you really?"

Mary Smith, who has found it's easier and quicker to stir up a tray of peach ice cream than to make a peach pie, lays down her cards and extols the virtue of a Westinghouse. Mrs. Prospect is impressed.

A couple of weeks later "Sam" calls again. This time Mrs. Prospect tells him about "the lovely things Mary Smith said about *her* Westinghouse." Eventually "Sam" sells her a refrigerator.

Then he goes right downtown and buys a big box of select chocolates. But he's too tactful to go directly to Mrs. Smith. He drops in at her husband's office. He tells him how indebted he is to Mrs. Smith for her effort, confides it was her enthusiasm and recommendation that really clinched the sale, asks Mr. Smith to present the candy to his wife with his compliments.

Smith thanks "Sam" for his thoughtfulness, assures him that his wife is always glad to say a word in behalf of the Westinghouse.

The candy, which "Sam" has left in a conspicuous place, reminds him of the incident all day. He mentions it to his secretary, his associates, his callers.

Mary, of course, is elated—and very much surprised. For days afterward she gossips with her friends about her selling ability and "that *nice* Mr. Vining."

Without realizing it she has become an ardent and active publicity agent for "Sam" and Westinghouse. And, according to Mr. Vining, many a sale has resulted from just one courtesy of this nature.

He says, "It's just good psychology. Inflate anybody's ego by making them feel important to your success and they'll work their heads off for you."

* * *

Sam's Selling Slants

That bright idea of Mahan's was to have "Sam" Vining write a letter to refrigeration salesmen periodically, trying to get his inspirational selling stories down on paper. Vining has done a good job of it. Here is a sample:

We hear a lot of bunk these days about high pressure selling. Personally, I don't know what is high pressure.

But, if I did know, you can bet your sweet life
I'd use it,
Because,

I am idealist enough to believe that if through high pressure methods I might force an electric refrigerator into a home that needs one,—provide purer food for that family—safer milk for the baby—better meat for father's indigestion:

If I can save mother from making one trip through the slush and ice and snow in the winter,—if I can save her one cold,—if I can keep her from exposing herself and her family to influenza or other epidemics, by reducing her trips to crowded stores and market places;

If I can save one trip a year,

For the Doctor,

To that home;

If I can help make the home so attractive father will do his entertaining in his own kitchen;

If I can put one smile of contentment, through labor saved, on mother's face,—if I can help smooth out one faint wrinkle of tiredness;

If I can do any of these things—any one of these things—through the use of a little high pressure, I will have satisfied a sense in me that hates wishy-washyness and gutless selling, and will not have used any powers of persuasion I may possess in vain.

High pressure may be just common sense—mixed with a bit of romance.

* * *

Confidential Opinion

One of the most interesting publications that comes to our desk is a privately circulated confidential bulletin from a Washington observer. This gentleman apparently knows his White House, his Congress, and his bureaucracy, for the things he predicts have a way of coming true a month or two after his letter arrives telling about them.

He must be the acrobatic Neatest Trick of the Week, for in order to get all the gossip and information he picks up weekly, he must surely keep his ear to the ground constantly, while running briskly from government building to building. We have a great deal of confidence in and respect for his reports.

Anyway this gentleman declares that the next big business boom will probably be enjoyed by those who make and sell refrigerators, home air conditioning, and new consumers' products. Refrigerators and air conditioning are the only products he mentions in the whole bulletin.

Tell that to the salesmen who think they'll "try something else" this winter.

* * *

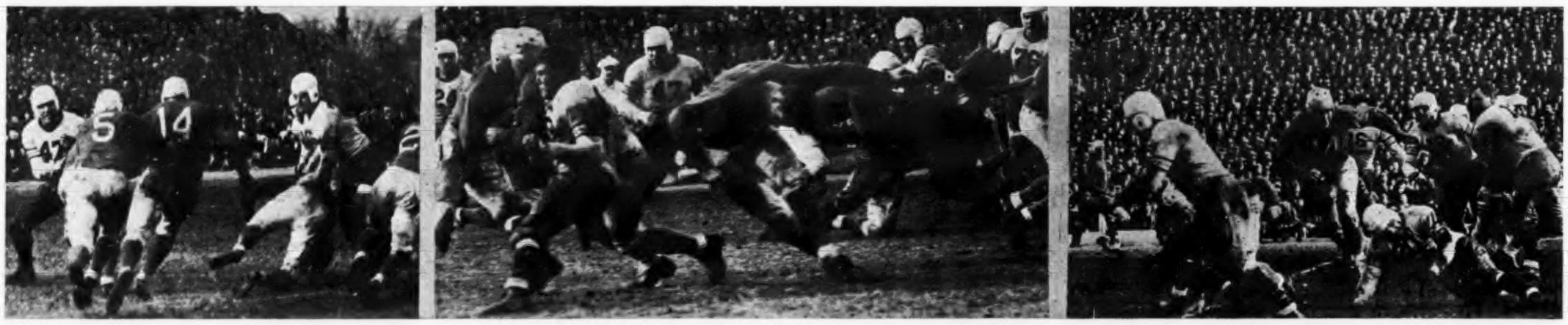
Los Angeles News Note

CLARENCE F. (SANDY) PRATT, head of the California Refrigerator Co., Los Angeles distributor of parts and accessories, writes in to say that he has installed a cooling system in an automobile. No details are given, but he tells how his customer had thermometers placed both inside and outside of his windshield, and took great pleasure in noting how much cooler it was inside this past summer.

This Is How It's Done Up in the Big Leagues

Heart-stopping moment in the Thanksgiving Day football contest between the world's champion Chicago Bears and the runners-up Detroit Lions. On this play Molesworth (No. 8) of the Bears so hard that his "Buster" Mitchell of the Lions, who tugged it to the put over the first touchdown. Note that the ball is Normally it would point slightly upward. This picture, Capt. Christensen of the Lions (extreme left) tackled intended forward pass was deflected into the arms of four-yard line, from which "Ace" Gutowsky was able to pointing downward as it leaves the passer's finger-tips. like others on this page, was taken by the editor of Electric Refrigeration News with the aid of a powerful telephoto lens.

(1) "Ace" Gutowsky of Oklahoma City (No. 5), Lions' fullback, is undecided whether to rush the passer or fade back to intercept the pass. (2) Bill Hewitt (No. 56) of Michigan and the Bears, considered the outstanding end of the day, lights heavily on his sitter while members of both teams laugh—note quarterbacks Glen Presnell (No. 3) from Nebraska and "Dutch" Clark (No. 7) from Colorado. (3) The mighty Bronko Nagurski of Minnesota (No. 3—carrying ball) goes through a wagon-room hole, aided by blocking so effective that at least one Lion was flat on his back.



(1) "Ace" Gutowsky, preceded by Capt. Christensen (No. 14), swings through a hole between Johnson and Musso. (2) "Father" Lumpkin from Georgia Tech, unconsciously demonstrates in the above picture the form which makes him one of the leading blockers of the league. Bill Hewitt (bareheaded) is being effectively blocked. (3) Blockers clear the path for a ball carrier.

Westinghouse to Turn 'House of Tomorrow' Into Home Economics Institute

MANSFIELD—Westinghouse closed its Home of Tomorrow here to the public Dec. 2, pending its reopening as a Home Economics Institute, it has been announced by A. E. Allen, vice president.

He made the announcement concerning the closing as a result of the expiration of the time the company had determined for the public to visit the Home of Tomorrow, so that the Westinghouse company can continue with its preconceived idea of using the home as a laboratory.

Approximately 75,000 persons, representing some 47 states and 24 foreign countries have inspected the Home of Tomorrow since its opening Feb. 21, 1934, Mr. Allen stated.

"Converting the Home of Tomorrow into a Home Economics Institute is the perfectly logical and natural step towards making the results of our manufacturing and testing available to the housewife," the Westinghouse vice president declared.

"We feel that the Home of Tomorrow Institute will carry on the work our engineers initiated by training and supervising the work of home economists from all parts of the country in the use of electrical appliances."

The Home of Tomorrow Institute will be opened Feb. 1 for its work. Certain portions of the home will be redecorated, and the first floor or basement will be remodelled.

The recreation room is to be made into a work room equipped with electric ranges and refrigerators so that training of home economists can be carried on under the supervision of Westinghouse home economists. Standard equipment will be put in the laundry so that classes can be held teaching the proper methods of washing and ironing clothes. Westinghouse major appliances of standard design will be used so that the home economists working with them will become acquainted with any equipment they use in the field.

Home economists of public utilities will receive the first invitation to participate in the work the institute is planning. Approximately 10 home economists can be accommodated in the home at one time. Facilities will be made so that the women will actually live in the home and become acquainted with problems arising throughout the normal routine of operating a home other than those of cooking.

Experience has taught many home economists that it is highly desirable to have a working knowledge of every phase of housekeeping, and it is to this end that the Westinghouse Home of Tomorrow Institute will work. Those taking the work will become familiar with all of the problems confronting the average housewife. They will be forced to anticipate interruptions in routine, and it is felt that they will be better fitted to instruct the housewife in the operation of electrical equipment if they work under these conditions, rather than in a laboratory where all the preliminary work and extra routine of keeping a house in operation is extraneous.

In addition to the remodelling for home economic training, the storage rooms will be made into appliance display rooms so that the women can become familiar with the complete line of electrical appliances.

Coin-A-Day Co. to Market Coin-Controlled Clocks

CLEVELAND—Coin-A-Day Co., Inc. of this city is planning a merchandising campaign to introduce its coin-controlled electric clocks, operated on the same principle as coin-controlled electric refrigerators.

Refrigerator Built with Revolving Shelves

LONG BEACH, N. Y.—Revolving shelves for an electric refrigerator have been developed by Chas. E. Passmore, a refrigerating engineer here. The outfit includes three shelves which are turned electrically by touching a foot pedal or hand button.

Top shelf, alongside the evaporator is stationary. Externally, the cabinet resembles a Grunow, Mr. Passmore states, while the inner liner is round. Motive power for turning the shelves is taken from the motor which drives the compressor.

No center shaft is used for the revolving shelves, he says, and there are spaces formed in the shelves for milk, butter, cream, eggs, etc.

G-E Cooking School Held At Women's Club

WATERBURY, Conn.—Hazel M. Fletcher, home service director of Modern Home Utilities, Inc., Connecticut distributor of General Electric kitchen appliances, gave a cooking demonstration Nov. 20, at the Hotel Wauregan in Norwich, Conn., for the Women's City Club, using in her presentation the G-E refrigerator and range.

Miss Fletcher was invited by this women's organization, through Earl G. Taggart, local G-E dealer, to give this demonstration. Total membership of the club is 300 women, and some 200 of these women were present.

'Liftops' Installed for Nebraska Apartment

NORTH PLATTE, Nebr.—Salesman J. W. Calhoun of the W. R. Maloney Co., General Electric dealer here, recently sold 10 G-E Liftop refrigerators for installation in the Mohawk Apartments, located in this city.

Has New Job

W. M. DeWITT
Recently placed in charge of Kelvinator domestic advertising.

'House Beautiful' Home To Have G-E Kitchen

NEW YORK CITY—When the magazine *House Beautiful* reopens its "Bride's House" at 444 Madison Ave. here on April 1, 1935, it will include a complete General Electric kitchen, according to E. H. Campbell, sales promotion manager of Rex Cole, Inc., G-E distributor in the area.

The Bride's House, when first opened to the public in 1934, consisted of drawing room, dining room, library and two bedrooms. The new kitchen which is being planned by Rex Cole will include a seven-cu. ft. Monitor Top refrigerator, an Imperial range and a model E dishwasher.

Doll Co. to Expand Artificial Food Line

CINCINNATI—Cincinnati Doll Co. is planning to produce 10,000 sets of artificial foods for electric refrigerator displays during 1935, it was announced last week by W. W. Goodman, director of the company's art department.

Nearly 100 different artificial food items have been designed by the Cincinnati Doll Co., Mr. Goodman declares.

All items but the eggs are made of a hard gypsum composition, which will stand heat and are washable with soap and water. The eggs are made of wax.

Entrance of the Cincinnati Doll Co. into manufacture of artificial foods followed upon a conference about a year ago with the Crosley Radio Corp., in which plans for a plastic display were discussed. During the conference the conversation was turned to artificial eggs, and Mr. Goodman and J. E. Berni of the Cincinnati Doll Co. decided to make an egg that would "fool a chicken." Development of other artificial foods followed in due course of time.

Holland Distributor Uses Pushcart for Display

AMSTERDAM, Holland—Not as expensive nor as roadable as the refrigerator display coaches used by U. S. distributors is that of Groenvelt & Co., Crosley distributor here, but its attention-getting qualities are excellent, the company says. Operating costs are low, too, as it is a one-manpower job.

Mounted between two large wheels is a long narrow bed, at one end of which is a handle by means of which a white-clad attendant pushes it around the streets of Amsterdam. On the cart is a Crosley Shelvador refrigerator and window-display appurtenances to dress it up.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office
Copyright, 1934, by Business News Publishing Co.
Published Every Week by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich. Telephone Columbia 4242.
Production Dept., 550 Maccabees Bldg., Columbia 4245.

Subscription Rates—U. S. and Possessions and all countries in the Pan-American Postal Union: $3.00 per year; 2 years for $5.00. Canada: $6.00 per year (due to special tariff). All Other Countries: $5.00 per year (U. S. Money)

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VOL. 13, NO. 14, SERIAL NO. 298, DECEMBER 5, 1934

Asking Too Much

NEWSPAPERS recently carried the following dispatch from Washington, D. C.:

> "The most difficult problem ever faced by an Administration is now before a group of nearly 200 experts as they seek to devise for President Roosevelt a program which will provide economic security for approximately 50,000,000 Americans."

Right there, in one sentence may be found the principal reason why this paper has blown cold upon so many features of the New Deal. We do not understand why it is necessary, or desirable, or even possible for 200 so-called "experts" to do the thinking for 50,000,000 Americans.

The problems and situations of 50,000,000 persons are so complex, so inextricably interwoven, and so discouragingly difficult to unravel, that the task of evolving an equitable program for such a staggering number of human beings to follow is at once too gigantic and too minute to be mastered by 200 satellites of the Brain Trust, no matter how learned or how astute. To concoct a "planned society" *which will work* is, in the opinion of this paper, asking too much of the human mind.

For our part, and for the refrigeration industry in general, we would much prefer to do our own thinking and find our own answer to the problem of "economic security."

Attempts made thus far by the New Dealers to solve the problems of this industry have only succeeded in muddling the situation, and in placing heavy handicaps on a young and growing industry which, because of its signal success in defeating the depression and giving employment to thousands of men during a period when jobs were exceedingly scarce, deserved a pat on the back and a free hand to go ahead, rather than obstructions and halters.

The NEWS has no objection to sincere and earnest efforts to provide sustenance for the aged, the sick, the helpless, the incapacitated, homeless children, and others who—because of Nature's indiscriminate ravages—are physically unable to take care of themselves. It's obviously necessary for somebody or some group to do the thinking for criminals in a prison, patients in a hospital, children in an orphanage, mental defectives in an asylum, and octogenarians in a home. But when a collection of theorists, no matter how brilliant, attempt to do the thinking for business and industry, their efforts can result in little but chaos and confusion.

To this fundamental conception of the New Deal—the idea that a few smart men can do the thinking for thousands of men who, by dint of long experience, patient effort, and a first-hand grasp of their own situations, are now running their own businesses—may be laid most of the ills which have beset the NRA.

It all seemed easy when the New Dealers planned it out on paper—easy, reasonable, and altogether exciting. But when it came time to draw up the codes, when the Big Brains were confronted with all the welter of conflicting, complex, and confounding intertwinings of the various components in each industry, most of them were ready to throw up their hands and their jobs—and some of them did.

To try to lay down a set of ironclad rules and regulations for an industry composed of large and small concerns which do business *with* and *in* other industries, some in big cities, some in small, scattered all over a mighty big country, with problems, hopes, ambitions, and troubles almost as diverse as those of the different peoples of Europe, was a task—it soon became apparent to all but the least discerning—so staggering that it defied attempts even to grasp its full significance, let alone work out an intelligent blue print for it. High officials of the NRA have admitted privately, within the hearing of the writer, that it is "absolutely impossible to work out so fundamental a project as an equitable cost accounting system for an industry on which a price-fixing program could be based."

The Number One purpose of the present Administration is—or should be—the reemployment of idle men. It is the contention of the NEWS that business men, who must do the reemploying, know more about their own businesses than a set of "experts" down in Washington can ever hope to learn; and that they can proceed *under their own steam* to rehire men faster than they can when Washington is attempting to do their thinking for them.

One feature of the present situation which has been overlooked by many observers and which, in our opinion, is fully as retarding to recovery as the paralyzing fright of capital, is the *time* which the New Deal is demanding from the days of business executives.

In these days business needs the full-time thinking of its heads, and needs badly the uninterrupted devotion of executives to the important jobs facing them. Instead, business executives must now spend long hours sitting, hat in hand, outside official doors in Washington; must devote nights upon nights to study of new regulations and how they apply to their own businesses; must take days out of the week to confer with other executives on the running of their industry under the new rules which have been handed down from On High; must spend other days figuring out ways and means of rebuilding sales volume which has been lost or endangered by governmental interference or competition.

If all that time were applied to the Siamese-twin labors of getting more business and increasing employment, the nation might be much further along the road toward recovery.

WHAT OTHERS SAY

F.O.B. or Delivered Prices?

THOSE who favor the idea of quoting prices f.o.b. factory in their advertisements must have been given something to think about by Chester H. Lang, director of publicity of the General Electric Co., who made the following statement in his Chicago address last week, in a discussion of misleading advertising:

"Someone might ask me if I consider it forthright advertising to show a price of $77.50 in figures two inches high, accompanied by a neat but obscure little six-point line reading 'f.o.b. the factory,' which means $94.50 or $99.50 to Mrs. Consumer when she goes to buy the article anywhere East of the Rockies.

"I suppose I'd be enough of a hypocrite to defend that ad by pointing out that it reflects the trade practice of the industry. But the still, small voice of conscience wouldn't be so sure."

Mr. Lang appeared to be referring to a practice which prevails in the advertising of electric refrigerators, and to the method of advertising prices of the G-E refrigerator—a frank criticism of his own company's merchandising methods which can be commended as refreshing in its willingness to examine current practices in impartial and open-minded fashion. If everybody proceeded on the same basis, there would be very few controversial subjects that couldn't be disposed of in a hurry!

The difficulty with quoting a factory price is not only that the customer does not know what the actual cost to him will be, but that the difference between the factory and delivered prices is usually far greater than the freight charges indicate. The various extras that somehow are always included produce a delivered price which is almost always out of line with what the customer expected to pay when he first noted the advertised price.

The final delivered price can be analyzed and explained, of course, since the items which produce it are available to the consumer. But there is nearly always considerable irritation on the part of the customer who, as Mr. Lang pointed out, is thinking in terms of $77.50 expenditure and learns later that it will have to be $20 or so more in order to effect the deal.

There are obvious difficulties in the way of establishing delivered prices, uniform over most of the country, on all advertised products, since the equalization of freight rates and other charges would create disadvantages for some sections as compared with others. But if the attitude of the public, which after all should be given first consideration, is any criterion, there is a lot to be said in favor of junking "f.o.b. factory" as advertising copy and substituting delivered prices exclusively.—*Advertising Age.*

LETTERS

Defends Public Utilities

The Electric Shop
Engineers and Contractors
Zenith Radio, Farm Lighting Plants, Incandescent Mazda Lamps, Refrigerating Plants, Pumps of All Descriptions, Motors, Gas Engines, Etc.
(Address Withheld on Request)
Nov. 26, 1934.

Editor:

I note remarks on the TVA project as made by you. I am glad to see that you have the necessary courage. With all due respect to President Roosevelt, I feel confident that with the same yardstick applied to government utility activities, that would be applied by private utilities, they will have a hard job showing as good results. Utility advocates show the saving made by not having to pay taxes, not apparently realizing that this generally simply means that some one else has to pay more. One large utility on the Pacific Coast makes the statement that their taxes are equal to two-thirds of their payroll.

Food and clothing are far more essential to the public than gas or electricity. No one seriously at this time in the U. S. proposes to make this a governmental institution, or furnish a yardstick.

It is very necessary that the people have the actual truth regarding current events. Therefore, have the government print all the newspapers, so as to insure the "truth"(?). Does anyone expect that any such "truth" would be given? Individuals differ honestly on current events, and being in the employ of Uncle Sam will not change this trait of human nature.

Most governmental institutions want better prices than the general public receives, and have arguments why this should be so. They generally get it, but as far as the general public is concerned, that use the same article, they are not helped much. If the government paid a reasonable profit, this would tend to reduce the price to the general public for the same article. Of course, the general taxpaying public makes a slight saving.

The chain stores have an undue buying advantage over competitors, and with the U. S. in the utility field, manufacturers and dealers will have the same difficulty.

In other words, it would appear that the taxpayers have to pay taxes to help put themselves out of business, by municipalities and other governmental institutions being able to pass overheads to other departments under various excuses and subterfuges.

As for courtesies, try the average postoffice and be a little out of patience and see how short they are likely to be. No private business could exist under such conditions.

(Signed.)

P. S.—Insull is often pointed out as an "horrible example" but he only lost money for investors, and not the consuming public. How many governments and municipalities have passed out bad securities? To mention somewhat about the cities not paying their interest in the U. S. Also—bonds issued by the southern states after the war?

The Code Situation

Refrigeration Division
National Electrical Manufacturers Association
1106 Penobscot Building
Detroit, Michigan
November 30, 1934.

Editor:

I want to point out that the last paragraph of your story about the agreement with the Refrigerating Machinery Industry is not *strictly* accurate. It is true that the trade practice provisions of the two Codes were the most important factor, and we feel that our members have little difficulty in getting exemption from the labor provisions of the RMI Code, in view of the fact that only about 1.7 per cent of their output will come under that Code. It is necessary, however, for each manufacturer to request NRA for an exemption from these labor provisions.

HALDEMAN FINNIE, Manager.

No Free Tool Kit

Refrigeration and Air Conditioning Institute, Inc.
2130-2158 Lawrence Avenue
Chicago, Ill.

Editor:

Upon reading carefully the article on the Refrigeration and Air Conditioning Institute in the ELECTRIC REFRIGERATION NEWS of November 14, I find there has been a slight misrepresentation of facts, which I hasten to call to your attention, because it would indicate there has been a slight misunderstanding on your part as to just what a student gets, and when he gets it.

I refer to the fourth paragraph, column 2, page 11, wherein you say—

"On completion of the first 30 lessons, the student is given a complete set of tools in a tool kit. This includes a Lenk torch, Klein pliers, Crescent wrenches, Miller Falls tools, hack-saw, soldering iron, two screw drivers, tube benders, a hammer, level, etc.—over 50 pieces in all."

If you will be good enough to refer to the resume of the Refrigeration and Air Conditioning Institute Training Course, you will find there is nothing therein about the tools which are pictured in the spread that I sent you.

What a student does receive when he has finished 30 lessons is the testing equipment mentioned on page 7 of the resume.

The tools are not included in the regular Training because the regular Training sells for $112.50. Where tools are included the price of the Training is $149.50 when student pays $5 down and $5 a month; $139.50 when student pays $10 down and $10 a month, and $129.50 when student pays cash, or pays in full within 60 days.

Outside of this, I think the article is splendid, as is also the article appearing on page 13 of your Nov. 14 issue.

RAY D. SMITH, President.

Error in Valves Article

3167 Cambridge Ave.
Chicago, Ill.

Editor:

I want to call your attention to the article "Three Service Valves Used in Checking Household Systems" in the Nov. 14 REFRIGERATION NEWS. It says there under Service Valve Construction:

"If the valve stem is turned all the way in or in a clockwise direction while the gauge is attached, the compressor is shut off from the gauge, but the gauge still remains connected either to the suction line or to the condenser."

There must be a mistake somewhere: If in my estimation the valve stem is turned in all the way that means clockwise: Then the *condenser or suction line* will be shut off from the gauge but the gauge still remains connected to the *compressor.*

I certainly would like to hear about it.

ROBERT REGORZ.

Handy Service Data

413 S. Jefferson Ave., St. Louis, Mo.
Nov. 19, 1934.

Editor:

I am a student enrolled with Utilities Engineering Institute of Chicago and am very interested in your publication, ELECTRIC REFRIGERATION NEWS. It has a great quantity of helpful information especially in servicing.

I remember reading in one issue that you contemplated a compilation of all service information, if so please state purchase price. On the other hand could a person buy only back copies that contained such matter, that is on orphans and also new models?

You will have a new subscriber to your publication beginning Jan. 1, 1935. It is well worth its price.

LESLIE WILLIAMS.

Answer: True, we are contemplating publication of a Master Service Manual covering all makes of machines, but it will not be ready for some time. In the meantime we are offering 21 back issues of the NEWS containing service instructions on "orphan" makes for $2.

Likes 'Master Manual' Idea

Boren Bicycle Co.
605 Main St., Little Rock, Ark.
Nov. 27, 1934.

Editor:

In the Nov. 21 issue of ELECTRIC REFRIGERATION NEWS in the "Letters Column," The Harry Alter Co., inquires in regard to a master service manual. This is or would be just what we want. Please enter my name for information regarding this as soon as available.

I. Z. MCCLEAN,
Refrigeration Service Dept.

P. S. You may not be able to give the names of the best schools, but you can easily tell the gyps. Bear down on these.

Mr. Dodge Looks Like That

Fairbanks Morse & Co.
Dallas, Tex.

Editor:

I enjoyed tremendously the candid camera pictures taken during the first convention held by Fairbanks-Morse Home Appliances, Inc.

I, like some of the officials of our company, think the one of Mr. Dodge with the glasses perched on his nose and gazing over them should have honorable mention. Many times I have sat opposite him and had him gaze just that way at me.

I would appreciate it exceedingly if you would send me a print of this picture, as I would like to have it enlarged.

I know that you are unfamiliar with our general set-up, but I am one of the employees of our company who is "waking them up" in Texas.

R. H. MORSE, JR.,
Manager.

Frigidaire Gets a Report from the Argentine

H. L. McGurk (center), vice president of Frigidaire, Ltd., with headquarters in Buenos Aires, tells W. F. Armstrong (left), vice president and assistant general manager of Frigidaire Corp., how things look in South America, as George D. Riedel (right), president of Frigidaire, Ltd., New York City, smiles his approval. Judging from the pile of Electric Refrigeration News issues on the table behind him, Mr. Armstrong is probably pretty well up on industry conditions both in the U. S. and abroad.

Rex Officials Visit Crosley Factory

CINCINNATI—Sixteen officials of the Rex Mfg. Co., Inc., Connersville, Ind., made a tour of inspection of the Crosley factory here recently. Rex is one of the principal suppliers of cabinets for Crosley refrigerators.

In the party were Claude Riggs, plant superintendent; Frank Crawford, assistant superintendent; Henry Moreton, general foreman, paint production lines; Earl Frank, paymaster and head of timekeeping department; Schuyler Miller, superintendent of paint; Paul Gebert, in charge of porcelain department; Louis Burgdorfer, assistant superintendent, porcelain plant; C. R. Jontz, assistant purchasing agent; Preston Cates, in charge of stock; Donald Doles, timekeeper; John Reeves, cost accountant; C. T. Backous, production department; Virgil Hood, foreman, metal shop; Harvey Royse, foreman, crating department; Hiram Wyrick and L. R. Churchman, plant foremen; and James Page, Crosley representative at the Rex plant.

Philadelphia Association Sponsors Lectures

PHILADELPHIA—"Theory of Refrigeration" was the subject of a lecture featured on the program of the Electric Refrigeration Association of this city when it met Nov. 1. This was the first of a series of lectures to be sponsored by the organization.

A credit information bureau is being formed for use by the association's membership, a fee to be charged all members during its formulative period.

Levinson Depicts Big Market in Palestine

CINCINNATI — David Levinson of Tel-aviv, Palestine, Crosley refrigerator and radio distributor there, visited the Crosley plant here Nov. 5 to transact business with factory executives.

Recent large movements of Jews from Germany and the United States into Palestine have been an important factor in swelling the market for radios and refrigerators, he reported, for these people have brought with them standards of living higher than those commonly accepted in Palestine. They want, and have the money to pay for, the conveniences they enjoyed in their former homes.

Major's Promotion Piece Spotlights 'Tempostat'

CHICAGO—Striking in its makeup and brevity, a new mailing piece has been prepared by Major Appliance Corp., manufacturer of Major refrigerators. Against a solid black background appears a small reproduction of a Major model, and above it a blowup of the Tempostat, cold control featured on this make.

Month-and-a Half Sales Saturates Market 25%

LEPANTO, Ark.—Salesman F. P. Best of the Arkansas Power & Light Co., with the assistance of W. H. Cross, manager, sold 25 G-E refrigerators in this city in a little more than a month-and-a-half. These constituted 25 per cent of the meters.

Westinghouse Kitchen Service Head Named

MANSFIELD, O.—Appointment of Irving W. Clark as field manager of kitchen planning service has been announced by Reese Mills, manager of the range and water heater department of Westinghouse Electric & Mfg. Co. here. Creation of this position is a part of an expansion program for the kitchen planning department.

Previous to his appointment, Mr. Clark was with Hartford Electric Light Co., Modern Home Utility, and Capitol City Lumber Co. of Hartford, Conn., as kitchen specialist. He also spent several years with the C. P. Chase Co., distributor of G. R. Sellars & Sons cabinets.

Mr. Clark will immediately initiate a program to encourage use of Westinghouse kitchens in display rooms of Westinghouse dealers, Manager Mills states, not only to give a better setting for ranges, refrigerators, and dishwashers, but to be used in kitchen demonstrations and cooking schools.

Jeane Adaire Joins Kontanerette Corp.

CHICAGO—Miss Jeane Adaire, for some years home economist with Frigidaire Corp., has joined Scurlock Kontanerette Corp. of Chicago, in charge of the division of consumer information.

She will work with the housewares and refrigeration departments of department stores, conducting and lecturing at cooking schools, and making radio talks on domestic refrigeration and food preservation. These talks will stress the practicability of storing food in covered receptacles like those made by Scurlock.

Dealers Cooperate in Window Display Project

KANSAS CITY—Moser & Suor, Inc., Norge refrigerator and RCA Victor radio distributor here, recently cooperated with the big Jones Store in a window display project.

Located at one of the busiest downtown corners, the Jones Store used a large display window for the performance of a magician, and a cutaway model of RCA Victor's "magic brain" was featured in the window with him. A public address system was installed, and over it the magician explained the device and suggested home demonstrations.

16 Stewart-Warners Sold To Miami Apartments

MIAMI BEACH, Fla.—Sixteen Stewart-Warner electric refrigerators were installed recently in the Rivorly Apartments, 800 Collins Ave., here by the Miami Appliance Co., 1141 W. Flagler St., Stewart-Warner dealer for Miami.

Kelvinator One-a-Day Club Joined by Nebraskan

LINCOLN, Nebr.—Newest member of Kelvinator Corp.'s unofficial one-a-day club is M. L. Peters of Rudge & Guenzel, Kelvinator outlet in this city, who sold 103 refrigerators in 102 days—an average of one sale every working day for the four months starting April 1 and ending July 31. Average sale price was $184.

Westinghouse Distributor Opens New Showroom

MINNEAPOLIS — Beercher-Cumming Co., Westinghouse distributor here, has recently opened a large new appliance display room. Refrigerators and air conditioners both have a prominent place in the showroom.

BOOKS

'Understanding the Big Corporations'

Authors: The Editors of "Fortune"
Publisher: Robert M. McBride & Co. Price: $3.00.

THIS recently published book by the editors of *Fortune* helps the helplessly uninitiated grasp some faint idea of what makes the Big Business wheels go 'round. It deals entertainingly with materials and markets, labor and capital, and particularly the lives and temperaments of the men who guide the destinies of these giant corporations.

Enthrallingly romantic stories regarding the growth of big corporations are related in a style that brings home forcibly to the novice the contribution of these corporations and of the men responsible for them, to the economic and political development of the United States.

The authors deal competently with the policies and growth histories of the following eleven corporations: International Harvester, U. S. Rubber, Ford, United Shoe Machinery, Continental Can, Air Reduction, National Steel, Johns-Manville, Pittsburgh Plate Glass, American Sugar Refining, Cannon Towels, Inc.

Anecdotes are used frequently, and invariably illustrates a very significant point. The following excerpt illustrates the atmosphere, as found by the authors, in the Ford plant:

"The spirit of the Ford plant is not a normal spirit and it is to be expected that anecdotes breed in it—breed and grow into myth and legend. There is for instance the story of the salesman from the outside world who had business with a member of the Ford traffic department. He talked to the traffic man, went back to the hotel, and the following morning telephoned the traffic man about some matter which they had not got around to taking up the day before.

"'Oh,' said the telephone girl, 'Mr. So-and-So isn't working here now.'

"Somewhat startled, the salesman asked whom he might talk to in the traffic department.

"'Oh,' said the girl, 'we haven't got any traffic department any more.'

"Of course, the Ford company has always had a traffic department, which certainly ruins the factual accuracy of the story. Yet the spirit of the anecdote is not foreign to the spirit at the Ford works.

"There is nothing that tells the truth about a people so well as its mythology."

The reader finds that International Harvester, according to the editors of *Fortune*, has the "theory that it is more important for its sales department to be selling machines than it is for its collection department to collect the money . . . . had conditions continued as they were in 1932 the time would sooner or later have been reached when it was more profitable to be paid than to sell . . . . and the Harvester policy of not pressing for payment but merely increasing its security with chattel mortgages and the like would have had the ultimate effect of bankrupting farmer and farm-machinery manufacturer together had a turn not occurred. As it is, however, that policy plays neatly into the hands of the New Deal for agriculture."

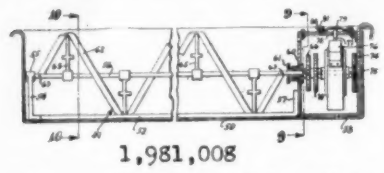
This definitive record of big corporations by the editors of *Fortune* is too vast for a general summing-up, but suffice it to say that it paints a graphic picture of industry, and makes statistics, organizations, policies, mergers, etc. come alive and *mean more* to the average reader.

PATENTS

Issued Nov. 20, 1934

1,981,008. ICE CREAM FREEZING TRAY. Martin G. Torson, Kansas City, Mo. Application Dec. 8, 1931. Serial No. 579,733. 3 Claims. (Cl. 259—110.)

1. In a freezing device, the combination of a tray adapted to be inserted in a freezing compartment and a stirring ele-



1,981,008

ment removably positioned in said tray, said stirring element comprising a housing, a support secured to and extending from said housing, a motor arranged in said housing, a stirring member rotatably mounted on said support and means connecting said stirring member and said motor whereby the latter drives the stirring member.

1,981,009. ICE CREAM FREEZING DEVICE. Martin G. Torson, Kansas City, Mo. Application Dec. 8, 1931. Serial No. 579,734. 4 Claims. (Cl. 62—116.)

4. In combination with an iceless refrigerator including an electric motor for actuating the freezing mechanism, a container, a stirring device in said container, means to drive said stirring device, a thermo-responsive switch for controlling the operation of said motor, means to cause said thermo-responsive switch to be ineffective to control the motor to stop the same, means operable when the viscosity of the substance being frozen in said container reaches a certain point to cause said drive to the stirring device to cease to operate and to cause said motor to be placed under control of said thermo-responsive switch.

1,981,010. ICE CREAM FREEZING TRAY. Martin G. Torson, Kansas City, Mo. Application Dec. 8, 1931. Serial No. 579,735. 1 Claim. (Cl. 259—109.)

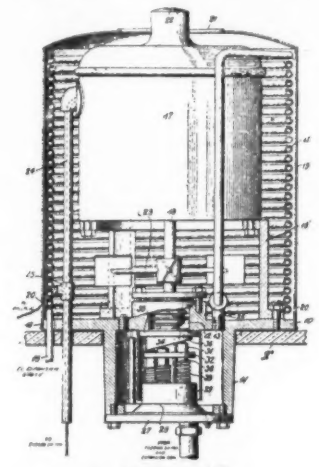
In an iceless refrigerator including a freezing compartment and a housing having a motor therein, a container adapted to be placed in said compartment, a rotatable stirring device in said container, a motor, means operable automatically on the insertion of said container into said compartment to cause said motor to start, means whereby said motor rotates said stirring device and an electrically operated overload switch associated with said stirring device and said motor, means whereby when the viscosity of the substance being frozen in said container reaches a certain point the overload switch will cause the operation of said motor to be discontinued and means operable automatically on the insertion of the receptacle into the compartment to actuate the overload switch to set position.

1,981,014. BEER COOLER. Otto Weigelt, Milwaukee, Wis. Application May 17, 1934. Serial No. 726,039. 2 Claims. (Cl. 257—183.)

2. In a device of the class described, horizontally extending water pipes disposed in vertical relation, and an integral eccentric longitudinal projecting distortion of the lower portion of the wall of each of the said pipes, a fusing material sealing the projecting portion with the pipe beneath, terminal manifolds on said pipes, and slideable dovetailed means connecting said manifolds to allow for longitudinal expansion and contraction of said pipes.

1,981,097. REFRIGERATING UNIT. Henry E. Elrod, Houston, Tex. Original application March 14, 1930. Serial No. 435,889. Divided and this application Sept. 18, 1931. Serial No. 563,618. 4 Claims. (Cl. 62—115.)

1. A condenser unit comprising a horizontal base plate adapted to rest upon the top of a cabinet, a coil mounted on said



1,981,097

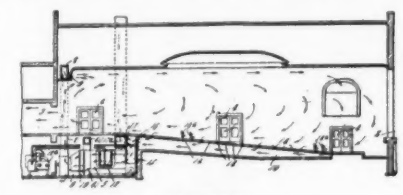
plate with the axis thereof perpendicular to said plate, a motor mounted on said plate in coaxial relation within the coil, a rotary compressor supported by the plate at its side opposite the coil and extending below the top of the cabinet in coaxial relation to the motor, and a drive shaft connecting the motor and compressor.

1,981,159. AIR CONDITIONER. John C. Wichmann, Chicago., Ill. Application Feb. 21, 1933. Serial No. 657,755. 6 Claims. (Cl. 257—138.

4. An air conditioner, adapted for connection with an air humidifier and purifier unit comprising a heat radiator, a casing enclosing said radiator, air distributing means within the casing including a pair of elongated inverted hoods vertically spaced and mounted below the radiator adapted to spray purified humidified air in a downward and upward path onto the radiator, dehumidifying means below one of said hoods in the path of the air from that hood to the radiator to dehumidify said air, and means for selectively directing the air into one hood or the other.

1,981,164. METHOD AND SYSTEM FOR VENTILATING AND CONDITIONING AUDITORIUMS AND THE LIKE. Willis H. Carrier, Essex Fells, N. J., assignor to Carrier Engineering Corp., Newark, N. J. Original application June 22, 1927. Serial No. 200,665. Divided and this application Aug. 12, 1930. Serial No. 474,772. 10 Claims. (Cl. 98—33.)

1. The method of ventilating and attemperating a room in which people congregate and which is so designed with

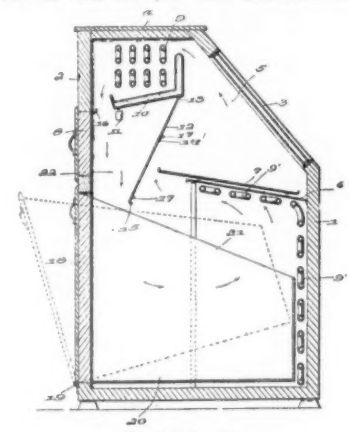


1,981,164

seats that the people normally face the front or stage portion of the room, which comprises injecting air at a high velocity into the room well above the occupied section and people and in a direction toward the front or stage portion of the room so as to avoid direct blasts into the said occupied section, and removing air from the lower or occupied section of the room at a plurality of points spaced in a direction forwardly and rearwardly of the room, whereby the injected air will be mixed with and tempered by the warm air of the room while passing through the upper section thereof, and the tempered air mixture then circulated rearwardly at a lower velocity in the lower occupied section of the room.

1,981,298. REFRIGERATOR DISPLAY CASE. Len A. Banta, Clearfield, Pa., assignor of one-half to Hussmann-Ligonier Co., St. Louis, Mo., a corporation of Delaware. Application June 14, 1930. Serial No. 461,188. 26 Claims. (Cl. 62—89.5.)

1. In a refrigerator display case, a door, means for hinging the lower edge of the door to the case, a bin attached to the



1,981,298

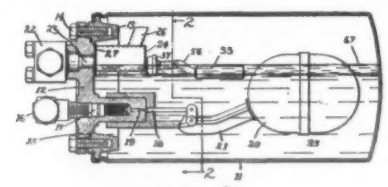
door and extending into the case therefrom, cooling means arranged within the case above the bin, and means for directing cooling air into cooling relation with the bin.

1,981,367. RADIATOR. Arthur J. Mason, West Hartford, and William L. Tancred, Hartford, Conn., assignors to The Bush Mfg. Co., Hartford, Conn., a corporation of Connecticut. Application Dec. 6, 1932. Serial No. 645,920. 9 Claims. (Cl. 257—124.)

4. A radiating structure including tubes disposed in substantially parallel relation with radiating fins spaced apart along such tubes, a supporting plate comprising sections applied to the tubes to stiffen the structure, loops formed in each of the sections, and a rod extended through said loops to fasten the sections together.

1,981,562. REFRIGERATING APPARATUS. Hubert R. Loranger, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application Oct. 25, 1929. Serial No. 402,403. 14 Claims. (Cl. 62—126.)

7. In a refrigerating system comprising an evaporator, a compressor, a suction line between the evaporator and the compressor, means for returning lubricant



1,981,562

from the evaporator to the compressor comprising a housing inserted in said suction line and provided with a lubricant chamber communicating at its upper portion by means of the suction line with the evaporator and at its lower portion with the suction line, and means for transferring lubricant from the evaporator into said chamber.

1,981,595. APPARATUS FOR CONDITIONING AIR. Gordon Don Harris, Old Greenwich, Conn. Application Jan. 13, 1932. Serial No. 586,436. 6 Claims. (Cl. 261—15.)

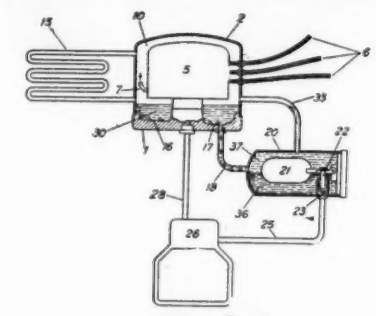
1. A humidifying apparatus comprising a casing having a plurality of staggered trays mounted therein, means associated with each tray for maintaining a body of water thereon, a heating element positioned within the body of water maintained on each tray for heating the water and generating vapors, means for causing a gas to flow serially over the bodies of water maintained on said trays, a blower associated with said apparatus, a conduit connecting the blower with said casing, and means operable, upon stopping of the operation of the blower for closing communication between the blower and said casing.

1,981,598. REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio. Application Oct. 30, 1933. Serial No. 695,757. 7 Claims. (Cl. 62—141.)

1. A refrigerating system comprising in combination, an evaporator adapted to contain a body of liquid refrigerant, means for normally preventing said body of liquid refrigerant from rising above a predetermined level in said evaporator, means for directing a liquid to be cooled through the body of liquid refrigerant in said evaporator whereby the refrigerant therein is caused to rise above said normal predetermined level, a compressor, a suction line communicating with said compressor and having a movable inlet disposed in said evaporator, and means operable independently of said first named means and controlled by the level of the body of liquid in said evaporator for maintaining the inlet of said suction line in substantially constant relation to the body of liquid in the evaporator.

1,981,606. REFRIGERATION APPARATUS. Anthony T. Stock, Elmwood Park, Ill. Application June 15, 1933. Serial No. 675,891. 20 Claims. (Cl. 62—115.)

1. In a refrigerating system, a container having a body of lubricant therein, compressing means adapted to discharge



1,981,606

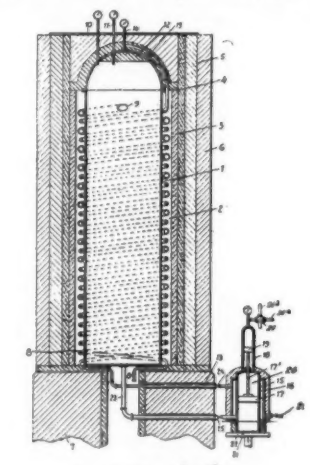
into said container, means for condensing said compressed refrigerant and depositing said condensed refrigerant in a receptacle, said receptacle adapted to hold a predetermined amount of liquid refrigerant in storage, communicating means from lowest portion of container to upper portion of receptacle allowing liquid refrigerant condensed in container to flow to receptacle, said receptacle being so disposed relative to said container that during normal operation, with normal heat dissipation, said receptacle is maintained at a substantially lower temperature than said container, valving means controlled by float in said receptacle, said float adapted to sink in lubricant but float in refrigerant, releasing any additional refrigerant from receptacle for refrigerating purposes.

1,981,675. METHOD OF PRODUCING SOLID CARBON DIOXIDE. Philipp Stapp, Munich, Germany. No. drawing. Application Sept. 7, 1929. Serial No. 391,113. In Germany Sept. 12, 1928. 3 Claims. (Cl. 62—121.)

1. The method of producing solid carbon dioxide ice direct from liquid carbon dioxide, consisting in so very gradually releasing the pressure within a closed receptacle containing liquid carbon dioxide as to cause the carbon dioxide to assume a dense, solid form.

1,981,676. APPARATUS FOR THE PRODUCTION OF SOLID CARBON DIOXIDE. Philipp Stapp, Munich, Germany. Application Aug. 1, 1930. Serial No. 472,478. In Germany Aug. 5, 1929. 10 Claims. (Cl. 62—121.)

1. Apparatus for the production of solidified carbon dioxide comprising a container into which liquid carbon di-



1,981,676

oxide is adapted to be admitted, a piston movable within said container to exert a compressive pressure on the carbon dioxide contained within said container, said piston being constructed to permit the escape of gas from said container at such a slow rate as to cause the carbon dioxide within the container to assume a dense solid form, said container being adapted to receive a jacket-member of insulating material acting as a covering for the block of solid carbon dioxide.

1,981,743. TRAY FOR REFRIGERATORS. Arthur W. Neel, Albany, Ind., assignor to McCormick Brothers Co., Albany, Ind., a corporation of Indiana. Application May 7, 1934. Serial No. 724,427. 1 Claim. (Cl. 211—153.)

A tray for the purpose described, comprising a frame and a supporting leg both composed of a continuous metal rod, said rod bent to form a rectangular frame comprising a front section, a side section, a rear section and a short end portion of the rod extending rearwardly from the front section and forming the front part of the opposing side section, the rear part of said opposing side section being offset upwardly from the rear section, thence extending forwardly to a point adjacent said end portion, forming a guard, said rod thence extending downwardly, forming a leg, the lower part of said leg being offset forwardly from the upper part thereof, and said short end portion of the rod being secured to said upper part of the leg.

1,981,830. REFRIGERATING APPARATUS. Seth L. Bright, Detroit, Mich., assignor, by mesne assignments, to Arctic Ice Corp., Detroit, Mich., a corporation of Michigan. Application Aug. 20, 1927. Serial No. 214,393. Renewed April 25, 1934. 37 Claims. (Cl. 62—121.)

1. In the method of forming dry ice bricks, those steps which consist in introducing a refrigerant under pressure into a chamber having rigid walls, maintaining substantially atmospheric pressure in said chamber and interrupting the flow of refrigerant by pressure exerted by the completely formed brick.

10. In the method of forming dry ice bricks, those steps which consist in introducing a refrigerant which is under pressure into a chamber having a rigid wall, expanding the refrigerant to substantially atmospheric pressure and controlling the passage of refrigerant to said chamber by the displacement of the accumulated refrigerant.

York's 25 Year Club Has Special Meeting

YORK, Pa.—Special meeting of the Twenty-Five Year Club of York Ice Machinery Corp was held last week at headquarters of the company here.

Purpose of the meeting, which was attended by the full membership of 281 persons, was to commemorate the coming to York, in 1897, of the late Thomas Shipley, brother of William S. Shipley, present president of the organization. The latter was chairman of the meeting and inducted new members into the club.

The club is composed solely of employees and executives of the company who can show records of continuous service on the York payroll for periods ranging from 25 to 45 or more years.

Quiet fans—

Not fans with motors - just FANS!

That's what I need. Isn't there any concern in this whole industry that makes them?"

(Part of a conversation which took place in our offices recently with a visiting manufacturer who is developing a new room cooler)

Do these new manufacturers - - new buyers - - know you?

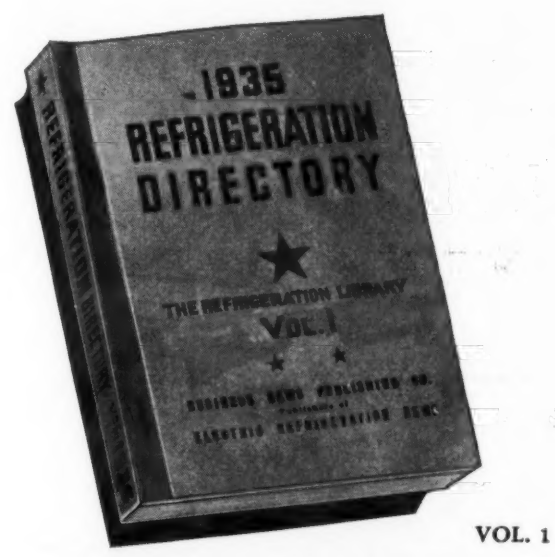
Manufacturers such as this, and there are many more like him, are designing new equipment. They need some material, some part or accessory to perfect their design. And when they want something *they want it,* and want it in quantities.

Here is a real and profitable market for you. Yet in most cases you can't get into initial touch with this new business because such developments are apt to be started and fairly well under way before the news gets out. These manufacturers have been out looking for sources of supply—they haven't been waiting for the suppliers to come to them.

Where do buyers first look for new suppliers of the material they require? Obviously in the only place where all their buying information on refrigeration is contained in compact, correlated form for ready reference—the REFRIGERATION DIRECTORY AND MARKET DATA BOOK—the recognized industry register of all trade-marked electric refrigeration and air-conditioning products.

Of course your name is listed in this directory without cost, but suppose you were looking through it to select some part or material. Which concerns would you contact first—those merely listed as making it or those describing in an informative advertisement exactly the product you need? And isn't the same thing true with your own prospects?

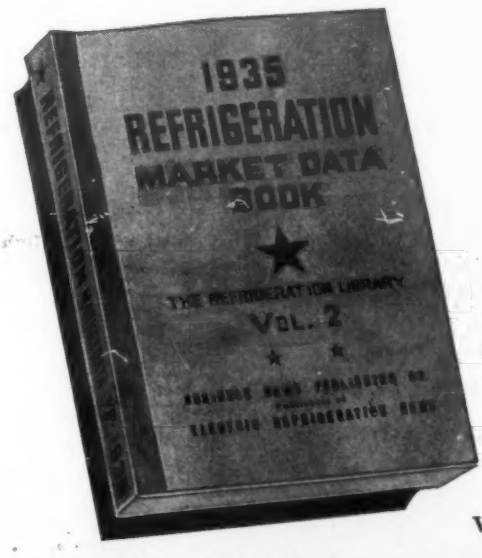
Give them the information that will bring them to your door. You can do so at a low cost. A full-page advertisement in the Directory costs only $100. A single order gained, or a new customer made, may pay for this advertisment many times over. Your advertising schedule will be incomplete if it does not include the 1935 edition of the REFRIGERATION DIRECTORY AND MARKET DATA BOOK.



VOL. 1

1935 REFRIGERATION DIRECTORY

Recognized industry register of all trade-marked refrigeration and air-conditioning products. Four complete sections— (1) Alphabetic list of manufacturers; (2) Index of trade names; (3) Classified list of refrigeration equipment, parts and materials with all sources of supply; (4) Geographical directory giving name, address, telephone number, and products of manufacturers. Independent service companies and jobbers of supplies, parts, and materials included.



VOL. 2

1935 REFRIGERATION MARKET DATA BOOK

Veritable encyclopedia of information on refrigeration and air-conditioning industries. All known facts and figures recording development up to date. Systematically arranged and tabulated. Subdivision by territories and types of products for market and sales analysis. Included are household, commercial, and air-conditioning sales statistics—survey of distributive channels—merchandising activity—potential market and other essential data.

The 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK (two volumes) $5.00 per set postpaid in the United States. In combination with a year's subscription to ELECTRIC REFRIGERATION NEWS, $6.50.

BUSINESS NEWS PUBLISHING CO.

5229 Cass Avenue - Detroit, Mich.

STATISTICS

57,980 Household Units MADE by 13 Nema Firms in October

The following figures, showing the number of electric refrigerators manufactured during October, 1934, are based on the reports of 13 members of the Refrigeration Division of National Electrical Manufacturers Association (Nema) listed in columns two and three.

	HOUSEHOLD Lacquer (Exterior) Cabinets with Systems	Production† Quantity
	Under 3.00 cubic feet..	10,914
1.	3 to 3.99 cubic feet..	228
2.	4 to 4.99 cubic feet..	6,745
3.	5 to 5.99 cubic feet..	11,546
4.	6 to 6.99 cubic feet..	3,094
5.	7 to 7.99 cubic feet..	5,787
6.	8 to 9.99 cubic feet..	58
7.	10 to 12.99 cubic feet..	3
8.	13 to 24.00 cubic feet..	.....
9.	**Total Lacquer**	*39,090
	Porcelain (Exterior) Cabinets with Systems	
10.	Under 4.99 cubic feet..	51
11.	5 to 5.99 cubic feet..	163
12.	6 to 6.99 cubic feet..	1,701
13.	7 to 7.99 cubic feet..	963
14.	8 to 9.99 cubic feet..	33
15.	10 to 12.99 cubic feet..	31
16.	13 to 24.00 cubic feet..	.....
17.	**Total Porcelain**	*3,293
18.	**Total Lines 9 and 17**....	*42,383
19.	Separate Systems	15,191
20.	Separate Household Low Sides	406
21.	**Total Lines 18, 19, 20**...	*57,980
22.	High Sides, ¼ hp. or Less	1,180
23.	Cabinets—No Systems...	13,817
24.	**Total Household**	.....
	COMMERCIAL	
25.	Water Coolers with High Sides	2,361
26.	Water Coolers with No High Sides.....	1,255
27.	Ice Cream Cabinets with High Sides.....	556
28.	Ice Cream Cabinets with No High Sides....	105
29.	Beverage Coolers with High Sides	240
30.	Beverage Coolers with No High Sides.....	171
31.	Room Coolers with High Sides	92
32.	Room Coolers with No High Sides.....	2
	Extra High Sides	
33.	⅓ to ½ hp. Incl.....	3,095
34.	Above ½ to 1 hp. Incl..	932
35.	Above 1 to 5 hp. Incl...	328
36.	Above 5 to 10 hp. Incl...	20
37.	Above 10 hp.	5
38.	**Total Lines 33, 34, 35, 36, and 37**	*4,859
39.	**Total Lines 25, 27, 29, 31, and 38**	*8,108
40.	Extra Commercial Low Sides	5,509
41.	Miscellaneous Cases and Cabinets	4
42.	**Total Commercial**	.....
43.	**Totals—Household and Commercial**	.....

*These totals are not the sum of the breakdown figures as two companies do not report on individual items.
†One company does not supply figures on Production.

World SALES of 13 Manufacturers Total 37,854 Units in October

The following 13 member companies of the Refrigeration Division of the National Electrical Manufacturers Association (Nema) reported sales for October, 1934: Crosley Radio Corp., Frigidaire Corp., General Electric Co., Gibson Electric Refrigerator Corp., Kelvinator Corp., Leonard Refrigerator Co., Norge Corp., Servel, Inc., Stewart-Warner Corp., Sunbeam Electric Mfg. Co., Uniflow Mfg. Co., Universal Cooler Corp., and Westinghouse Electric & Mfg. Co. Member companies not reporting included: Apex Elec. & Mfg. Co., Jomoco, Inc., Merchant & Evans Co., and Sparks-Withington Co. The sales of the reporting companies do, however, include units manufactured for the following concerns: Major Appliance Corp., Montgomery Ward & Co., Potter Refrigerator Corp., Sears, Roebuck & Co., and Truscon Steel Co.

	HOUSEHOLD Lacquer (Exterior) Cabinets with Systems	Domestic Sales Quantity	Domestic Sales Value	Canadian Sales Quantity	Canadian Sales Value	Other Foreign Sales Quantity	Other Foreign Sales Value
	Under 3.00 cubic feet..	1,204	$ 63,892	29	$ 1,456	4,756	$247,963
1.	3 to 3.99 cubic feet..	122	7,342	.....	.....	65	3,856
2.	4 to 4.99 cubic feet..	7,889	510,033	90	6,511	4,023	253,544
3.	5 to 5.99 cubic feet..	4,055	347,246	71	5,396	1,075	85,556
4.	6 to 6.99 cubic feet..	1,638	153,991	36	3,380	311	29,733
5.	7 to 7.99 cubic feet..	2,502	296,003	31	3,247	277	29,551
6.	8 to 9.99 cubic feet..	360	43,097	5	618	74	9,002
7.	10 to 12.99 cubic feet..	43	9,124	.....	.....	19	4,472
8.	13 to 24.00 cubic feet..	14	3,368	.....	.....	.....	.....
9.	**Total Lacquer**	17,817	1,434,096	262	20,608	10,600	663,677
	Porcelain (Exterior) Cabinets with Systems						
10.	Under 4.99 cubic feet..	683	58,377	.....	.....	310	26,298
11.	5 to 5.99 cubic feet..	264	25,636	.....	.....	36	3,480
12.	6 to 6.99 cubic feet..	1,752	195,824	.....	.....	204	23,196
13.	7 to 7.99 cubic feet..	1,606	206,929	2	253	282	34,560
14.	8 to 9.99 cubic feet..	773	116,995	6	847	291	43,167
15.	10 to 12.99 cubic feet..	207	37,523	3	509	57	10,229
16.	13 to 24.00 cubic feet..	229	51,285	1	212	95	21,238
17.	**Total Porcelain**	5,514	692,569	12	1,821	1,275	162,168
18.	**Total Lines 9 and 17**....	23,331	2,126,665	274	22,429	11,875	825,845
19.	Separate Systems	1,791	78,873	.....	.....	223	9,620
20.	Separate Household Low Sides	305	5,119	23	355	32	573
21.	**Total Lines 18, 19, 20**...	25,427	.....	297	.....	12,130	.....
22.	High Sides, ¼ hp. or Less	325	17,707	7	410	39	2,189
23.	Cabinets—No Systems...	36	2,997	.....	.....	600	24,061
24.	**Total Household**	.....	2,231,361	.....	23,194	.....	862,288
	COMMERCIAL						
25.	Water Coolers with High Sides	809	89,555	1	85	52	5,653
26.	Water Coolers with No High Sides.....	53	2,873	.....	.....	4	229
27.	Ice Cream Cabinets with High Sides.....	108	15,902	.....	.....	177	22,614
28.	Ice Cream Cabinets with No High Sides....	120	15,981	2	212	9	1,014
29.	Beverage Coolers with High Sides	179	14,326	1	263	3	390
30.	Beverage Coolers with No High Sides.....	132	8,777	4	572	10	480
31.	Room Coolers with High Sides	1	747	.....	.....	17	3,939
32.	Room Coolers with No High Sides.....	22	3,270	.....	.....	45	6,994
	Extra High Sides						
33.	⅓ to ½ hp. Incl.....	1,496	121,298	26	1,948	409	30,678
34.	Above ½ to 1 hp. Incl..	688	81,621	10	1,351	62	7,944
35.	Above 1 to 5 hp. Incl...	332	69,875	7	1,535	38	7,019
36.	Above 5 to 10 hp. Incl...	21	10,957	.....	.....	10	5,664
37.	Above 10 hp.	9	6,852	.....	.....	.....	.....
38.	**Total Lines 33, 34, 35 36 and 37**	2,546	.....	43	.....	519	.....
39.	**Total Lines 25, 27, 29, 31, and 38**	3,543	.....	45	.....	768	.....
40.	Extra Commercial Low Sides	3,153	92,670	52	2,215	579	30,242
41.	Miscellaneous Cases and Cabinets	34	7,902	2	367	.....	.....
42.	**Total Commercial**	.....	542,606	.....	8,548	.....	122,860
43.	**Totals—Household and Commercial**	.....	$2,773,967	.....	$31,742	.....	$985,148

STOCKS of Nema Members Show Increase During October

	HOUSEHOLD Lacquer (Exterior) Cabinets with Systems	U. S. A. INVENTORIES Factory Branch and Warehouse† Quantity	Factory Branch and Warehouse† Value	Distributors‡ Quantity	Distributors‡ Value	Dealers Quantity	Dealers Value
	Under 3.00 cubic feet..	18,813	$ 994,754	3,794	$ 195,307	2,930	$ 152,564
1.	3 to 3.99 cubic feet..	330	23,776	510	30,797	1	72
2.	4 to 4.99 cubic feet..	34,069	2,333,106	11,140	720,658	8,047	522,496
3.	5 to 5.99 cubic feet..	49,727	4,079,051	9,173	746,714	7,693	611,230
4.	6 to 6.99 cubic feet..	24,109	2,262,206	5,780	548,544	6,914	612,842
5.	7 to 7.99 cubic feet..	22,659	2,577,813	4,527	508,223	4,302	500,717
6.	8 to 9.99 cubic feet..	4,080	475,293	774	94,556	1,308	148,666
7.	10 to 12.99 cubic feet..	967	204,653	103	20,930	43	8,753
8.	13 to 24.00 cubic feet..	166	42,016	41	10,882	9	2,193
9.	**Total Lacquer**	154,910	12,992,678	*42,525	*3,373,568	31,247	2,559,533
	Porcelain (Exterior) Cabinets with Systems						
10.	Under 4.99 cubic feet..	9,125	755,298	1,150	100,169	1,525	126,188
11.	5 to 5.99 cubic feet..	3,261	313,633	850	88,526	368	37,345
12.	6 to 6.99 cubic feet..	5,975	658,692	2,966	345,676	3,289	376,463
13.	7 to 7.99 cubic feet..	13,847	1,795,118	2,707	366,548	3,581	467,899
14.	8 to 9.99 cubic feet..	2,980	440,575	1,637	253,406	1,886	277,353
15.	10 to 12.99 cubic feet..	435	80,527	346	67,727	435	80,260
16.	13 to 24.00 cubic feet..	1,716	419,611	360	88,357	157	35,979
17.	**Total Porcelain**	37,339	4,463,454	*13,524	*1,677,229	11,241	1,401,487
18.	**Total Lines 9 and 17**.....	192,249	17,456,132	*56,049	*5,050,797	42,488	3,961,020
19.	Separate Systems	38,694	1,888,789	.....	.....	.....	.....
20.	Separate Household Low Sides	8,060	122,839	316	5,827	121	2,165
21.	**Total Lines 18, 19, 20**...	239,003	.....	*56,365	.....	42,609	.....
22.	High Sides, ¼ hp. or Less	1,088	57,234	184	9,876	79	4,270
23.	Cabinets—No Systems...	52,445	2,215,607	39	2,892	9	877
24.	**Total Household**	.....	21,740,601	.....	*5,069,392	.....	3,968,332
	COMMERCIAL						
25.	Water Coolers with High Sides	7,395	637,112	2,294	237,563	433	38,428
26.	Water Coolers with No High Sides.....	1,683	71,575	92	5,309	16	590
27.	Ice Cream Cabinets with High Sides.....	1,077	153,603	61	9,149	3	450
28.	Ice Cream Cabinets with No High Sides....	2,190	277,443	189	23,350	12	1,461
29.	Beverage Coolers with High Sides	1,235	89,614	166	10,933	172	11,065
30.	Beverage Coolers with No High Sides.....	969	62,386	190	11,376	62	4,550
31.	Room Coolers with High Sides	2,108	597,541	285	61,004	155	33,175
32.	Room Coolers with No High Sides.....	2,046	486,589	230	26,967	44	3,594
	Extra High Sides						
33.	⅓ to ½ hp. Incl.....	10,528	901,646	1,641	141,158	316	25,774
34.	Above ½ to 1 hp. Incl..	3,807	503,666	1,020	135,542	238	30,561
35.	Above 1 to 5 hp. Incl...	2,483	548,407	821	167,737	105	50,180
36.	Above 5 to 10 hp. Incl...	138	82,090	13	7,578	1	556
37.	Above 10 hp.	119	111,054	.....	.....	.....	.....
38.	**Total Lines 33, 34, 35 36 and 37**	17,075	.....	*3,561	.....	660	.....
39.	**Total Lines 25, 27, 29, 31, and 38**	28,890	.....	*6,367	.....	1,423	.....
40.	Extra Commercial Low Sides	22,894	778,779	3,604	136,610	750	22,289
41.	Miscellaneous Cases and Cabinets	692	200,308	143	44,806	24	7,007
42.	**Total Commercial**	.....	5,501,813	.....	1,019,082	.....	229,680
43.	**Totals—Household and Commercial**	.....	$27,242,414	.....	*$5,088,474	.....	$4,198,012

*These are not the totals of breakdown as two companies do not report individual items.
†Two companies do not supply figures on Factory, Branch, and Warehouse Inventories.
‡Three companies do not supply figures on Distributors Inventories.

8,426 Refrigerators Sold in New York In October

The following report of sales by states to distributors and dealers is based on the reports of 13 members of the National Electrical Manufacturers Association (Nema) who submitted their sales figures for October, 1934. The names of reporting companies are given in columns two and three.

States and Territories	Quantity of Household Low Sides (Line 21)
Alabama	199
Arizona	97
Arkansas	68
California	2,121
Colorado	64
Connecticut	435
Delaware	51
Dist. of Columbia	321
Florida	1,272
Georgia	301
Idaho	51
Illinois	1,966
Indiana	315
Iowa	153
Kansas	170
Kentucky	274
Louisiana	162
Maine	97
Maryland	384
Massachusetts	829
Michigan	423
Minnesota	241
Mississippi	109
Missouri	380
Montana	30
Nebraska	97
Nevada	43
New Hampshire	66
New Jersey	1,176
New Mexico	26
New York	8,426
North Carolina	165
North Dakota	35
Ohio	1,280
Oklahoma	79
Oregon	108
Pennsylvania	1,311
Rhode Island	190
South Carolina	229
South Dakota	30
Tennessee	217
Texas	654
Utah	43
Vermont	42
Virginia	250
Washington	108
West Virginia	107
Wisconsin	219
Wyoming	13
Total United States	25,427
Total Canada	297
Other Foreign (Including U. S. Possessions	12,130
Total for World	37,854

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QUESTIONS

Data on Solid CO-2

No. 1967 (Advertising Agency, Missouri)—"We have been seeking information concerning dry ice, particularly its present uses, potential uses, and what success has been attained in using dry ice as a home refrigerant. We are also interested to know to what extent dry ice is being used in shipping, both by rail and ship.

"We were referred to you for this information by *Advertising & Selling*."

Answer: Most important uses of solid carbon dioxide (dry ice) from the standpoint of quantities consumed are its applications in refrigerated trucks, ice cream cabinets, and commercial refrigerators that are used for the storage and display of quick-frozen foods.

A few railway refrigerator cars have been built for application with solid CO_2, but a more extensive use in shipping by railroad seems to be its application to less-than-carload lots of perishables. We know of a few specific instances in which solid CO_2 is employed in marine refrigeration, but its use in this field does not appear to be extensive.

A number of household refrigerators have been designed for solid CO_2, but there is nothing to indicate that a large number of these refrigerators have been sold.

A bibliography giving selected references on solid CO_2 has been compiled by V. A. Pease, Food Research Division, Bureau of Chemistry and Soils, U. S. Department of Agriculture, and includes a large number of sources of information on this subject.

An exhaustive article on the application of solid carbon dioxide to ice cream cabinets was published in the November, 1932. issue of REFRIGERATED FOOD NEWS, while the July, 1932, issue of this same publication contained an article on the application of solid CO_2 to trucks. The Nov. 14, 1934, issue of ELECTRIC REFRIGERATION NEWS contains an article dealing with the development of a number of appliances which employ solid CO_2 as the refrigerant.

Copies of these issues may be secured for 10 cents each by addressing Business News Publishing Co., 5229 Cass Ave., Detroit, Mich.

Fleisher's Speech

No. 1968 (Manufacturer, Kansas City)—"You recently sent us the Dec. 13, 1933, issue of ELECTRIC REFRIGERATION NEWS and on the first page of it is an article entitled 'New Data Given on Condensing Water in Air Conditioning'—in which is mentioned an address given by Walter L. Fleisher, consulting engineer, before a meeting of the A.S.R.E. convention. We are wondering if it would be possible to supply us with this original address by Mr. Fleisher together with a set of the charts mentioned therein."

Answer: The complete text of Mr. Fleisher's address before last winter's convention of the A.S.R.E. was published, with charts and tables, on page 19 of the January, 1934, issue of the magazine *Refrigerating Engineering*. That issue can be obtained by writing the American Society of Refrigerating Engineers, 37 W. 39th St., New York City.

'Nordic' Refrigerator

No. 1969 (Dealer, Wisconsin)—"Have you any information on a Nordic refrigerator? This is a semi-sealed unit similar to the Majestic. Compressor is direct connected to a Century motor. It is a twin-cylinder job and has only one set of discharge valves.

"It is impossible for us to get this unit to operate in a vacuum, with the result that the suction pressure is from 5 to 10 lbs. Therefore we get no refrigeration effect. The unit looks something like a Gibson. We have tried to locate the concern which made this unit but so far have had no results."

Answer: We do not know the firm that manufactures the "Nordic" unit. If any reader can answer the questions in the above inquiry, we would appreciate hearing from him.

Portable Room Cooler

No. 1970 (Prospect, Ohio)—"If you have any free literature on room size portable air conditioners I would be glad to receive it. I want to know whether or not I can use my present compressor attached to my Frigidaire, cost of the units, cost of operation, cost of probable repairs, etc."

Answer: A functional directory of air-conditioning manufacturers was published on pages 6 and 8 of the Sept. 26 issue of ELECTRIC REFRIGERATION NEWS. This directory listed the functions performed by each manufacturers equipment together with a brief general description.

Detailed specifications of air conditioners (with prices, in many instances) were published in the Oct. 31, Nov. 7, and Nov. 21 issues of ELECTRIC REFRIGERATION NEWS.

Copies of these four issues may be obtained at a cost of 10 cents each by addressing Business News Publishing Co., 5229 Cass Ave., Detroit, Mich.

We do not know of an air conditioner that will operate from the refrigerating unit of a self-contained household electric refrigerator.

Refrigeration for Soap

No. 1971 (Exporter, New York)—"A foreign refrigerator importer writes as follows:

"'Having now an opportunity to introduce mechanical refrigeration in the soap industry, I need some information in order to make my work easier. The first problem to resolve in this country is the hardness of the soap in a shorter time than the usual in the actual process. Another problem is the economy of water in the distillation and concentration of some products that are necessary for the soap's industry.

"'Please send me some information about the modern process in these industrial operations, by means of mechanical refrigeration. I also wish to have a book, pamphlet, or magazine in English, French, or Spanish, explaining these matters. If you can furnish me with such printed matter, I will be very grateful.

"'I am also interested in knowing some references about installations already made in the U.S.A.'"

Answer: Data on this type of industrial application can probably be obtained from the Frick Co. in Waynesboro, Pa., and the York Ice Machinery Corp., York, Pa., both of which are manufacturers of refrigerating machinery for industrial applications.

Majestic Service

No. 1972 (Service Man, Rhode Island)—"Could you tell me where I may have a Majestic hermetically sealed unit serviced?

"I would like the address of the company nearest this state. I would appreciate it if you would supply me this information by mail."

Answer: The only agency of which we have record for servicing hermetically sealed Majestic refrigerators is the factory itself.

By order of the court, a department has been established and is being operated at the Majestic plant for servicing existing machines. Address the Refrigeration Service Department, c/o Frank M. McKey, Trustee in Bankruptcy, Grigsby-Grunow Co., 5801 Dickens Ave., Chicago.

Industry Information

No. 1973 (Business Man, Wisconsin)—"Will you please advise your suggestions of reading material which would give a person about to enter the refrigeration field a good general knowledge of both domestic and commercial refrigeration?"

Answer: ELECTRIC REFRIGERATION NEWS, weekly newspaper of the electric refrigeration industry, covers current merchandising, engineering, production, and service activities in its editorial columns. It keeps those engaged in the industry informed of all current activities, developments, and trends.

For a newcomer who wishes to know what has transpired in the past and who would like to become familiar with the nature of the electric refrigeration industry, we recommend a perusal of back issues of the NEWS. We have on hand a supply of paper bound volumes of the weekly issues in groups of four months each, these bound volumes of four months of industry news selling for $3 each.

Commercial Sales Up

No. 1974 (Manufacturer, Michigan)—"We understand that sales of commercial refrigeration are well ahead of last year. Can you give us some idea of the extent of increase?"

Answer: Dollar volume of commercial refrigeration sales is about 30 per cent ahead of the first 10 months of last year. Month-by-month comparisons show increases over corresponding months of last year for 9 out of the 10 months of 1934. A detailed analysis is being worked out for publication in an early issue of ELECTRIC REFRIGERATION NEWS.

Service Men's Society

No. 1975 (Manufacturer, Indiana)—"Have you any information pertaining to the Refrigeration Service Engineers Society.

"We are very desirous of having a complete up-to-date file of available installation and service men throughout the country so that we may pass this information on to our various distributors for their information.

"We have been wondering for some time where we could obtain an up-to-date complete list of capable installation and service men and it occurred to the writer that the above-mentioned society should formulate such a plan if they expect to be of maximum assistance to their members.

"If you know of any other medium through which this information could be satisfactorily obtained we would be very appreciative of having this information."

Answer: Activities of the Refrigerating Service Engineers Society as outlined at the recent convention of the society were reported in some detail in the Oct. 17 issue of ELECTRIC REFRIGERATION NEWS. The information in that article is about all we know of the society.

We have asked for the list of their members two or three times, but to date it has not been forthcoming.

CLASSIFIED

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

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MANUFACTURER'S REPRESENTATIVE contacting Michigan concerns is interested in new lines to sell especially to mechanical refrigerator makers. If you have something new to offer, let us help. We know the men to see and can get to them. In business over fifteen years. Commission basis only. Exclusive representation only. Box 654.

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1 subscription	$3.00	$5.00	$6.50
5 or more each	2.75	4.50	6.50
10 or more each	2.50	4.00	6.50
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